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# INVESTIGATION OF CONCENTRATION OF ECONOMIC POWER

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## TEMPORARY NATIONAL ECONOMIC COMMITTEE

A STUDY MADE UNDER THE AUSPICES OF THE DEPARTMENT OF COMMERCE FOR THE TEMPORARY NATIONAL ECONOMIC COMMITTEE, SEVENTY-SIXTH CONGRESS, THIRD SESSION, PURSUANT TO PUBLIC RESOLUTION NO. 113 (SEVENTY-FIFTH CONGRESS), AUTHORIZING AND DIRECTING A SELECT COMMITTEE TO MAKE A FULL AND COMPLETE STUDY AND INVESTIGATION WITH RESPECT TO THE CONCENTRATION OF ECONOMIC POWER IN, AND FINANCIAL CONTROL OVER,  
PRODUCTION AND DISTRIBUTION  
OF GOODS AND SERVICES

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MONOGRAPH No. 4-6

### CONCENTRATION AND COMPOSITION OF INDIVIDUAL INCOMES, 1918-1937

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Printed for the use of the  
Temporary National Economic Committee



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MONOGRAPH No. 4

## CONCENTRATION AND COMPOSITION OF INDIVIDUAL INCOMES, 1918-1937

BY

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The Temporary National Economic Committee is greatly indebted to the author for this contribution to the literature of the subject under review.

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(Signed) JOSEPH C. O'MAHONEY,  
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## LETTER OF TRANSMITTAL

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This report concerns itself with the problems of how the distribution of individuals' income has changed since 1918, and how it varies from year to year. Attention is centered particularly on the degree of concentration in the hands of the largest income receivers. The record is based upon income-tax material, with various adjustments making the data as comparable as possible, despite the many changes in tax laws and regulations. Further analysis breaks these incomes down according to source, in order to find explanations for the shifts. Finally, corrections are made for relief and veterans' bonus payments, and estimates are made after taxes, in order to picture the concentration of purchasing power.

It should not be necessary to argue that such information is of great significance to any understanding of the functioning of the economic system. It is basic to the problem of capital accumulation and the underlying adjustment of consumption, savings, and investment, so necessary to attaining full activity and employment. However, it has a more direct connection to the subject of monopoly. Large fortunes have most often had their basis in situations in which strong elements of monopoly appear. And the possession of financial strength is helpful, to say the least, in obtaining or maintaining industrial controls which take various monopolistic forms and which perpetuate or enhance the concentration of income. Of course, incomes would be by no means equal in a perfectly competitive economic system. However, the degree of income concentration can be taken as one indicator of the degree to which monopolistic elements are present in our economy.

This report has been prepared in the National Income Division of the Bureau of Foreign and Domestic Commerce, under the direct supervision of Robert R. Nathan.

WILLARD L. THORP,

*Adviser on Economic Studies, Department of Commerce.*

WASHINGTON, D. C., March 1, 1940.



## SUMMARY OF STATISTICAL FINDINGS

This summary is confined to the statistics presented in this study. With the exception of the introduction, each chapter contains, in addition to statistical data, material on the meaning of income concentration and composition which, it is believed, will be of assistance in properly interpreting the statistical findings. Chapter II presents, for the past two decades, measures of the concentration of income received by individuals in the United States in return for personal services and the ownership of property. The concentration of income is measured by the shares of the income of all individuals received by the highest 2 percent and smaller proportions of the Nation's income recipients. The statistics reveal that the shares of total individual income received by the higher income recipients have generally increased during periods of business expansion and declined during periods of business contraction. Subject to certain exceptions, the larger the average income of all income recipients the greater has been the degree of income concentration.

For the period from 1918 through 1937 the degree of income concentration was lowest in the depression years 1920 and 1932 and highest in the prosperous years 1928 and 1929. There has been no significant trend over the period as a whole and the degree of income concentration during the recent years 1934 through 1937 has been at approximately the same level as during the years 1918 through 1924. For these two periods the average income, corrected for price changes, was also approximately the same. The years 1925 through 1933 witnessed wide fluctuations in income concentration. In contrast, from 1918 through 1924 and 1934 through 1937 the degree of income concentration fluctuated within relatively narrow limits. Apart from minor variations associated with the short cyclical movements in business activity, the concentration of income increased during the period of rising income and expanding business activity from 1922 through 1928. Most of this increase took place during the years 1925 through 1928. After 1929 the income shares of the higher income recipients declined sharply along with general business activity, reaching a minimum in 1932 and 1933. These shares then increased from 1934 until 1937. The sharp reversal in the upward trend of business in the middle of 1937 was accompanied by a decline for that year in the income shares of the higher income recipients.

Measures of income concentration are presented for five proportions of income recipients, varying in size from the highest 2 percent to the highest one one-hundredth of 1 percent. The changes in the income shares received by these various proportions of income recipients in the higher brackets followed for the most part the same general pattern, increasing in years of business prosperity and declining in years of business depression. However, the smaller the group of income recipients, the larger, relatively, were the year-to-year changes in the size of the income shares. The income shares of the smaller groups, that

is, the groups with the higher incomes, declined more during periods of business depression and increased more during periods of business prosperity than the shares received by the more inclusive groups. This difference in the behavior of the income shares received by the various proportions of income recipients was larger as the size of the group varied from the highest 2 percent to the highest one one-hundredth of 1 percent. The increases in the shares received by the higher income groups were particularly large during the period of marked business prosperity from 1925 through 1928. For example, the income share of the highest 2 percent of income recipients rose by 35 percent from 1924 through 1928 while the income share received by the highest one-tenth of 1 percent rose by as much as 75 percent. There are some further differences in the movement of the shares of income received by these various proportions of income recipients which are described in chapter II.

Tables are also presented in chapter II showing the number of persons included in the various proportions of income recipients, the income levels which separate these income groups, and the average incomes. In the year 1936, for example, there were approximately 50,363,000 income recipients, excluding employees of State and local governments. In this year the highest 2 percent of income recipients included slightly over 1,000,000 persons with incomes of \$4,390 and over.<sup>1</sup> The average income of this group was \$11,955 as compared with an average of \$1,065 for the other 98 percent and \$1,275 for all income recipients. The smallest group for which income shares are measured is the highest one one-hundredth of 1 percent of income recipients which in 1936 included 5,036 persons with incomes above \$116,430. The average income of this group was approximately \$250,000.

During the period studied, the minimum income levels of the various proportions of income recipients have been subject to wide fluctuations. In 1928, for example, persons with incomes above \$10,140 were included within the highest 1 percent of income recipients whereas in 1934 it would have required an income of but \$5,375 to be included with the same group. In 1932 and 1933 the minimum incomes for the highest 1 percent of income recipients were even lower than in 1934, but for reasons indicated at a later point no data are presented for these years. The income levels which separated the various smaller proportions of income recipients have also varied widely during relatively brief periods. In 1934 anyone with an income in excess of \$80,775 would have been included with the highest one one-hundredth of 1 percent of income recipients, while in 1936 an income at least 44 percent larger, \$116,430, was necessary for inclusion in this category.

Chapter III presents statistics showing how the various types of income, such as employee compensation, dividends, and interest were combined each year to produce the incomes of all income recipients and of the various proportions of higher income recipients whose income shares were given in the preceding chapter. In addition, the concentration of each type of income among the higher income recipients is shown. These statistics have a twofold purpose: First, they indicate how the different types of income were distributed

<sup>1</sup> This income level represents an understatement as the income tax statistics which were used as the basis for the estimate were not adjusted for nonreporting or underreporting of incomes. See ch. II, p. 15.

among the various groups of income receivers and how this distribution changes with increases and declines of the total income and of each type of income. Second, they provide the basis for an analysis of the shifts in income concentration in terms of the composition of income.

In the year 1922 when the degree of income concentration was approximately equal to the average for the past two decades, the highest 1 percent of income recipients received 29 percent of their income from salaries and wages, 19 percent from entrepreneurial net income (net profits from unincorporated businesses), 25 percent from dividends, 14 percent from interest, 8 percent from profits on the sale of property, and 5 percent from net rents and royalties. In this year, 63 percent of the income of all individuals was derived from salaries and wages, 19 percent from entrepreneurial net income, 5 percent from dividends and 6 percent from interest, about 2 percent from net profits on the sale of property, and 6 percent from net rents and royalties. Comparison of these two sets of percentages reveals that dividends, interest, and net profits from the sale of property were much more important sources of income for the highest 1 percent of income recipients than for the other income recipients. If employee compensation and entrepreneurial net income are classified as income primarily from personal service and the other income sources as income primarily from property, the former accounted, in 1922, for 82 percent of the income of all income recipients and 48 percent of the income of the highest 1 percent.

For all income recipients and for the highest 1 percent the relative importance of the various income sources has varied with changes in business conditions. Salaries and wages were generally a larger proportion of income in times of business depression and dividends and net profits from the sale of property were generally larger proportions of income in times of business prosperity. There has been during the period studied a general decline in the importance of net rents and royalties and entrepreneurial net income. The latter source contributed a considerably smaller proportion to the income of the highest 1 percent during recent years than during earlier years of a comparable degree of income concentration. This decline has been accompanied by a marked increase in the importance of employee compensation and in recent years these two sources together constituted a slightly larger share of the income of the highest 1 percent than in previous years characterized by a similar degree of income concentration.

The type of income contributing the largest share to the income of the highest 1 percent of income recipients has changed several times since 1918. In 11 years during the 20-year period from 1918 through 1937, the two sources classified as income primarily from personal service (employee compensation and entrepreneurial net income) contributed a greater share to the income of the highest 1 percent of income recipients than did the sources classified as income primarily from property. Employee compensation was the largest single income component in 12 years, dividends in 6, net profits from the sale of property in 1, and entrepreneurial net income in 1.

Data are presented which show the proportion of each type of income received by the highest 1 percent of income recipients. The extent of concentration varied from a small proportion of salaries

and wages—6 to 7 percent—to the major portion of dividends and net profits from the sale of property. The proportion of total dividends received by this group in different years ranged from 58 to 70 percent.

On the basis of data on the composition of income by income classes, it is shown that the importance of employee compensation, entrepreneurial net income, and net rents and royalties fell as the size of income increased and the importance of dividends and net profits on the sale of property rose sharply as the size of income increased. Interest constituted an increasingly important source for the larger incomes until the very high incomes were reached, in most years \$100,000 and over, after which it dropped in importance. Above this amount incomes were derived chiefly from two sources—dividends and net profits on the sale of property with profits being of greater importance in years of high business activity. In 1932 virtually all income classes incurred losses from the sale of property.

The data on the composition of individual incomes, and on the concentration of the various types of income, throw considerable light on the "causes" of the changes in income concentration. Shifts in income concentration are largely explainable in terms of year-to-year differences both in the relative importance of different income sources and in the concentration of these sources. Due to both the high concentration of dividends and net profits from the sale of property and the relatively large variation in their volume from year to year, shifts in income concentration were usually associated with fluctuations in these two sources of income. Increases in their volume which were greater than the increases in total individual income accounted in large part for the sharp rise in income concentration during the years 1925 through 1928. The decline in income concentration after 1929 may be attributed in large part to net losses from the sale of property, chiefly in the form of securities. The reduction in the amount of dividends after 1930 was also an important factor in the lessened concentration of income during the early thirties.

In contrast to the large changes in the concentration of income during the years 1925 through 1933, the degree of income concentration fluctuated within fairly narrow limits from 1918 through 1924. During this period dividends as a share of individual income did not vary greatly and the volume of net profits from the sale of property was relatively small. The different behavior of these two income sources during the two periods, 1918 through 1924 and 1925 through 1933, suggests that in the absence of marked fluctuations in dividends and profits and losses for the sale of property, the concentration of income would not vary much from year to year.

The fluctuations in the volume of dividends and net profits from the sale of property were responsible in large part for the greater variability in the income shares received by the highest income groups, as the higher the income of the group, the more important were these two sources. In a few years the changes in the income shares of the various groups of income recipients departed from the usual pattern of increased variability for the higher income groups. These divergent movements are also explainable in terms of the changes in the composition of individual incomes which took place.

In chapter IV statistics are presented which measure to a considerable extent the shifts in the concentration of "purchasing power,"

that is, in the portion of current income which is available to individuals for spending or saving. In order to obtain the distribution of purchasing power, the distribution of income received in return for personal service and for the ownership of property should be adjusted to take account of income taxes and transfers of income such as gifts, contributions, and direct relief. The most striking difference between the trends in the concentration of income received in return for personal or capital services and the concentration of purchasing power is the greater increase in the concentration of purchasing power that occurred during the twenties. The share of total income received by the highest 1 percent of income recipients increased by 51 percent from 1918 through 1928 while the increase in the share of income available for saving and expenditure by this proportion of income recipients was 60 percent. This larger increase in the concentration of purchasing power was due to the decline during this period in the rates of Federal income taxation, particularly after 1924. In 1918 Federal income taxes absorbed 13.5 percent of the income of the highest 1 percent of income recipients and in 1928 only 7.4 percent.

In contrast to this sharper increase in the concentration of purchasing power than in the concentration of income for the years 1918 through 1928, the rise in the concentration of purchasing power after 1934 was not as great as the rise in the concentration of income. In 1936, when the surtax rates on incomes above \$50,000 were raised, the share of income received by the highest 1 percent of income receivers rose by 8 percent while the increase in the share of purchasing power available to this proportion of the Nation's income recipients was only 3 percent. For the highest one-tenth of 1 percent of income recipients there was, in fact, no increase in the share of purchasing power available from 1935 to 1936, although the proportion of total income received by this group rose by as much as 10 percent.

In the latter part of chapter IV the effect of relief payments and the veterans' bonus on the concentration of income is determined. The measures of income concentration presented in chapter II included work-relief earnings in total individual income, but excluded direct-relief payments and the veterans' bonus. If work-relief payments are also excluded, the income shares of the higher-income recipients are, of course, slightly larger. The differences, however, are slight. The largest difference was in 1936 when the highest 1 percent of income recipients received 14.53 percent of the total income with work relief earnings included and 15.09 percent when this income is excluded. The effect of including work-relief wages in income is to diminish slightly the fluctuations in income concentration from 1934 through 1937.

The inclusion of direct-relief and veterans' payments as well as work-relief payments also diminishes the magnitude of the fluctuations in income concentration. From 1934 to 1936 the income share of the highest 1 percent of income recipients rose by 9.5 percent when relief and bonus payments are included in the total income of individuals as compared with 12.4 percent when these items are excluded.



## CHAPTER I

### INTRODUCTION

#### I. DISTRIBUTION OF INCOME AND PROBLEMS BEFORE THE TEMPORARY NATIONAL ECONOMIC COMMITTEE

The distribution of the Nation's total income among individuals and the changes in this distribution are of such fundamental importance that knowledge concerning them is relevant to a consideration of many of the problems before the Temporary National Economic Committee. A brief statement of the relation of the distribution of income to some of these problems will be useful in evaluating the significance of the statistical findings of this study.

Of foremost interest is the intimate relation of the distribution of income to monopoly and the effectiveness of competition in general. The distribution of income in recent times reflects the existing monopolistic elements in the economy and, through the transmission of wealth derived from earlier monopolistic situations, the elements of industrial monopoly that have prevailed in the past. Historically, public indignation concerning the large fortunes and hence large incomes which had as their source either a strategic control of an industry, a particular product, or a natural resource, provided much of the impetus for the enactment and enforcement of laws designed to curb monopolistic practices. From what is known of the rise of great fortunes and incomes, very many, possibly the majority, resulted from the exploitation of circumstances in which strong elements of monopoly were present.

The dominant source of these fortunes has varied with the economic development of the Nation. Rising land values; poorly organized markets; control of natural resources such as oil, copper, aluminum, and timber or of important stages in their fabrication; railroad development; strategic positions in the Nation's financial markets; promotions of consolidations in industry; monopolistic practices and conditions in industries such as steel and tobacco; and the rapid expansion of new industries such as agricultural machinery, electrical appliances, motion pictures, chemicals, and radio—all these situations provided the basis for many of the large fortunes and in all of them strong elements of monopoly are found. The incomes derived from a monopolistic situation often have provided the financial power which has been used to further the concentration of industrial control. Such increases in the power of monopoly have in turn made it possible to sustain a level of profits sufficiently high to perpetuate and augment these incomes. In this way the relationship between the concentration of income and industrial monopoly has tended to be interacting and cumulative. The inheritance of these great fortunes operates to continue the concentration of income. The perpetuation of large fortunes, however derived, is a potent factor in diminishing equality of opportunity and, therefore, results in a greater degree of inequality in the distribution of income than would otherwise be the case.

The large incomes derived from monopolistic practices illustrate in a striking manner the relation between the concentration of income and monopoly. This relationship, however, is of more general importance than is indicated by confining attention to the very large incomes. There are, of course, many more incomes of lesser size that are a result of a wide variety of practices which may be broadly described as monopolistic. With the exception of incomes derived from inherited wealth, main reliance is placed upon competitive forces to determine the distribution of the Nation's income among individuals. To the extent that competitive situations are lacking in our economy, incomes larger than competitive conditions would permit are present. These smaller incomes also play an important role in the concentration of income.

It may be confidently stated that were it not for past and present monopoly in one form or other, the prevailing distribution of income would be considerably more equal. Or, to put the same thought in other words, the eradication of the monopolistic elements in our economy and the repeal of the privileges which persist as a result of monopoly existing in earlier periods of the Nation's history would bring about an income distribution significantly different from that which now obtains. This is not to say that increasing the effectiveness of competition would yield equal incomes for all. A considerable degree of income inequality seems to be consistent with a high degree of competition and is probably an essential characteristic of a competitive economy. The elimination of a wide variety of monopolistic controls and practices would, however, have the effect of reducing the degree of income concentration. The task of eradicating the monopolistic elements in the economy may be expressed positively as the fulfillment of the conditions necessary for the maintenance of competition in the production and marketing of goods and services. Furthermore, it would involve the correction of the abuses in corporate finance made possible by strategic positions of individuals or groups of individuals. In areas where the maintenance or extension of competition as a regulative force is not feasible it would be necessary to maintain effective controls limiting the incomes to reasonable, competitive amounts. The accomplishment of these tasks would diminish the concentration of incomes and, by eliminating the source of the type of large incomes which most men consider unjust, would remove to a considerable extent the doubts which are entertained as to the equity of the present pattern of income distribution.

The importance of competition as a factor in bringing about a more equal distribution of income may be further illustrated by the unemployment problem and the concentration of dividend receipts. Insofar as the present large volume of unemployment is attributable to causes which may be ultimately traceable to the enervation of the competitive forces in the economy, strengthening of these forces will result in the reemployment and the consequent increase in the incomes of those dependent on public and private relief. Reemployment attained through this method will bring about both an increase in the national income and a change in the distribution of income in favor of the unemployed. The importance of controlling corporate profits through effective competition is readily appreciated by examining the relation of dividend receipts and the concentration of income. Inasmuch as the ownership of American corporations is

highly concentrated among individuals, as evidenced by the concentration of dividend receipts, a decline in the effectiveness of industrial competition, accompanied by no other significant changes, is likely to be reflected in an increase in the concentration of income.<sup>1</sup>

The relation between the distribution of income and industrial organization and control may be approached from another angle; namely, the supply of capital for enterprises of various sizes. The availability of funds for relatively small-scale enterprises is probably closely related to the character of the distribution of income. Individuals either in small businesses or organizing them typically obtain their equity capital from their own savings or from the savings of friends and relatives. The relative importance of moderately sized incomes is, therefore, a basic factor in determining the importance of small-scale enterprises.

While the concentration of income is not a direct measure of the concentration of economic power, as the term is generally understood, the two are closely related. The concentration of economic power and control arises chiefly from devices of corporate organization, business practices, strategic positions in business and finance, the control of organized groups, and ownership. The economic power exercised by specific individuals through these methods is not necessarily commensurate with the size of their incomes. Largely because of the separation of ownership and control in corporations, receivers of large incomes from dividends may not themselves exercise much control. In addition, incomes derived from interest payments do not usually carry with them significant amounts of control. On the other hand, even if large dividend recipients do not themselves exercise directly the power which goes with their incomes, others exercise this power for them and the result, as far as concentration of power is concerned, is somewhat the same. Often the opposite situation takes place when a large dividend recipient owning a large block of stock exercises a greater amount of control than many individuals who own, in the aggregate, a larger portion of the corporation. Furthermore, concentration of income among individuals may not reveal the true extent of the concentration of income among members of the same family and they may jointly exercise power greater than their individual incomes would indicate.<sup>2</sup> It is readily appreciated that while there is a significant relationship between the concentration of individual income and the concentration of economic power, this relationship is neither simple nor direct.

As profits from the sale of securities were a major factor in producing the increase in the degree of income concentration during the twenties, the problem of preventing a repetition of the stock-market situation of those years assumes added importance. In this connection, appropriate banking, credit, and fiscal policies would do much to prevent a recurrence of the rapid increase in the concentration of income such as took place after 1924. In addition, the rise in secu-

<sup>1</sup> See ch. III for data on the concentration of dividend payments.

<sup>2</sup> Family is used here in broader sense than a household. An illustration of this aspect of concentration of power was provided by the testimony of Robert H. Jackson before the Senate Committee on Finance. Basing his statement on unpublished income-tax statistics, Mr. Jackson revealed that of the 58 taxpayers with gross income (defined as total taxable and nontaxable income before deductions for realized capital losses, taxes paid, etc.) of \$1,000,000 and over in 1932, 38 were accounted for by membership in 14 families. See Hearings Before Committee on Finance on H. R. 8974, 74th Cong., 1st sess., p. 176.

rity prices during the twenties was also related to the merger or combination movement in industry and to the rapid increase in the corporate profits which characterized these years. Both of these developments are a part of the problem of maintaining effective competition in industry.

In recent years there has been a growing interest in the influence of the volume of consumption, saving, and capital formation on economic stability and the full utilization of resources. As the volume of individual saving is determined, for the most part, not only by the size of the total income but also by the distribution of that income, knowledge of the changes in income distribution is important in this connection. The description presented in this report of the trends in the concentration of income over the past 2 decades may, therefore, be of assistance in furthering the understanding of the relationship of income distribution to the functioning of the economic system as it is influenced by changes in the ratio of saving to consumption. With reference to this problem, information on the distribution of income and the changes therein is basic to both an evaluation of the effect of existing tax policies on the volume of saving and, if such measures are considered desirable, to the formulation of fiscal measures designed to promote economic stability and progress by influencing the volume of saving.

Furthermore, the distribution of income is a factor of cardinal importance in determining the demand for specific goods and services and the allocation of the Nation's resources among various uses. In particular, the rapidity of capital formation is dependent, in large part, on the nature of the income distribution. With the increase in the importance of durable consumers' goods and luxury and semi-luxury goods, the problems of marketing and producing these goods are closely related to the size and distribution of income. Shifts in the direction of consumers' demand for such goods have introduced elements of uncertainty in many industries, and information concerning these shifts may be of assistance in coping with the problems of producing and marketing consumers' goods.

The distribution of income is, of course, the basic factor in determining the distribution of welfare among individuals and families<sup>3</sup> and knowledge of the trends in the concentration of income is, therefore, fundamental to an appraisal or an evaluation of the functioning of our economy as it is reflected in the welfare of the various groups in the population. Are the rich becoming richer and the poor, poorer? Is the middle class being wiped out? Few questions of a social or economic nature seek answers more insistently. Indeed, in the light of the basic philosophy of democracy, the statistics on the national income and the volume of physical production, when used to indicate the economic progress of the Nation, are meaningful only when the distribution among individuals of the ability to claim the products of the Nation's output is known. Moreover, historical comparison

<sup>3</sup> The relationship between the distribution of income and welfare, however, is not a direct one nor one upon which there is general agreement. For example, under certain assumptions regarding this relationship income inequality may decline during a depression year, but welfare inequality may rise because of the fall in the level of incomes. For a brief discussion of the viewpoints concerning the relation of income and welfare see the article by Simon Kuznets on the National Income in the *Encyclopedia of Social Sciences*, vol. XI, pp. 220-223. The above example is presented in this article.

of these indexes of economic well-being is valid only insofar as the distribution of income is unchanged.<sup>4</sup>

While it is beyond the scope of this introductory note to consider the influence of the various factors which determine the distribution of income, the fact that many of these are within the commonly accepted sphere of governmental activity makes a brief mention desirable. Public policy has generally attempted to eradicate various monopolistic abuses and practices. The basic requirement is that competitive situations in the Nation's markets for commodities and individual services be maintained, and, where they do not exist, that competitive situations be brought about or, if this is not feasible, that other methods of control be instituted. The importance of this task for the distribution of income has already been noted.

Of far-reaching importance is the relation of taxation and public expenditures to the distribution of income. The more obvious changes in the distribution of income are brought about by the imposition of personal income taxes, estate taxes, and inheritance taxes. The fact that the concentration of income differs in various phases of the business cycle might lead to a consideration of the desirability of a flexible system of income taxation—that is, a system whereby personal income-tax rates would be raised during periods of prosperity and lowered during periods of depression. By diminishing the fluctuations in income concentration a flexible-rate structure may, if accompanied by other essential measures, reduce the intensity of the cyclical movements in business activity.

Taxation and public expenditure, however, affect the distribution of income in many other ways. It is commonplace knowledge that, as the value of the benefits a specific individual receives from public expenditures is rarely equal to the direct and indirect taxes he pays, the act of taxation and the provision of governmental services inevitably involves a change in the distribution of income. The tax system not only directly influences the distribution of income but also, through its influence on business activity, the size of the national income. The size of the national income in turn has widespread effects on the distribution of income and welfare. In addition, the purposes to which governmental expenditures are devoted influence both the current distribution of income and the future distribution of income. One of the ways by which governmental expenditures affect the future distribution of income is through their influence on the efficiency and mobility of labor. These expenditures may take the form of providing greater equality of opportunity to secure education and specialized training, improving the labor market by employment exchanges, and various other measures for increasing the efficiency and mobility of labor. If the system of education including vocational guidance and training brings about a greater equality of opportunity, a more equal distribution of individual productive capacity, and an increase in the efficiency and mobility of labor, these would, in themselves, result in a more equal distribution of income. However, this result would be realized only if a competitive market for services exists, particularly

<sup>4</sup> The national income, for example, is the net value of the goods and services produced in a given year. As the types of goods and services produced in a given year are influenced by the size distribution of income, the interpretation of the national income totals of different years, after taking account of price changes, requires information on the income distributions in the respective years.

with regard to freedom of entry into occupations and flexibility of the rates of pay. Devoting tax revenues to the improvement of the efficiency and mobility of labor would also make possible a larger national income. The state resorts to more direct methods of influencing the distribution of income when it sets wages and prices, subsidizes specific groups, and supports the monopoly power of others. These methods of direct governmental intervention in the distributive process have been steadily increasing.

## II. PURPOSE OF PRESENT INQUIRY

In the light of the foregoing discussion, the highly restricted purpose and scope of this investigation make it a modest contribution, indeed, to an understanding of these problems. The purpose of the present inquiry is to fill a gap in the body of information upon which judgments concerning these problems must be based. It is largely a statistical examination of the trends in the concentration and composition of income over the past two decades. In the immediately following chapter, measures of the concentration of income from 1918 through 1937 are presented and the indicated trends are related to the broad economic movements of the period. In the third chapter an explanation of the trends in the concentration of income is sought by an analysis of the changes in the composition of income; that is, the shifts in the relative importance of wages, interest, dividends, etc. In the last chapter the effect of certain types of income and taxes on the concentration of income is shown and measures of the concentration of "purchasing power" for the years 1918 through 1937 are presented.

## III. GENERAL CHARACTERISTICS OF DATA

It might be well to indicate at the outset the general characteristics of the basic data utilized in this study. The available information falls far short of that required to answer all the important and far-reaching questions concerning the distribution of income. In view of the significance of the subject, considerable effort has been expended to make the fullest use of the available information and, so far as practicable, to correct the deficiencies of the basic data.

Information on the incomes in the higher brackets was obtained from tabulations of the Federal income-tax data. The official income-tax statistics have been published annually in volumes entitled the *Statistics of Income*. Unfortunately, these data are not easily adapted for use in economic and social analysis. The most important limitation of the Federal income-tax information is the fact that it covers with reasonable completeness but a small percentage of the Nation's income recipients. Furthermore, the data on these relatively high incomes are merely a byproduct of the administration of the Federal income-tax law. As such they are subject to important limitations for use in economic analysis resulting chiefly from the special methods of defining income embodied in the effective income-tax laws, the complexity and changing character of these laws, and the practices which have developed in connection with the law. In addition, the methods adopted in tabulating such a complex mass of data have created problems, especially when one is interested in comparable information on total income and specific sources over a fairly long

period. Considerable effort has been devoted to analyzing and correcting to some extent the deficiencies of these data, but as is obvious to those familiar with the income-tax laws and the derived data, a complete analysis would probably fill several volumes. Examination of the income-tax legislation, court decisions, the voluminous regulations and rulings of the Commissioner of Internal Revenue, and the publications of various commercial services which seek to interpret the laws, provides ample evidence of this fact. However, the vast majority of changes in the definition of income are not of sufficient importance to affect seriously the basic data. It is hoped that the important changes have been noted and taken into account so that the final measures of income concentration are reasonably correct. The other principal data utilized are annual estimates of the total income of all individuals and of the number of income recipients.

In order not to divert the attention of the reader from the basic objectives of the study, the detailed discussion of the underlying statistics, the methods of estimation and adjustment, and the more technical aspects of the study have been placed in an appendix. The concepts of the study, the sources of the data and their more important limitations, and the extent to which the basic statistics are adjusted, are all indicated in the text. Reference is made in the various chapters to relevant appendix notes.



## CHAPTER II

### THE CONCENTRATION OF INCOME: 1918-37

#### I. DEFINITIONS

Each year individuals receive shares of varying sizes of the Nation's total income. Two time-honored questions concerning this process continue to occupy a prominent position in the thoughts of those interested in understanding the operation of our business economy and in evaluating the various aspects of social and economic life. How is the total income of individuals distributed among the Nation's income recipients in a given year? Has this distribution changed from year to year and what has been the trend? It is to the second of these questions that this chapter is primarily devoted. An attempt to answer these questions cannot be undertaken until the meaning of income and income recipient is given. The definition of these terms will vary with the objectives of the inquiry. Depending upon the objective, different stages in the process of income circulation may be selected at which to measure the distribution of income. Without entering upon a detailed discussion of the complex question of the definitions of income, three stages may be distinguished. These may be conveniently described as the distribution of "earning power," "purchasing power," and "real income." The following paragraphs will indicate briefly the purposes which each of the distributions is designed to serve and the income items included in each. The definition of the term "income recipient" will also be presented.

##### 1. *"Earning Power."*

One of the purposes of the present study is to develop for the past two decades measures of the concentration of income among individual income recipients which would indicate their relative success in obtaining primary distributive shares of the Nation's total income. The primary distributive shares are those received as a direct result of participation in the conduct of the business economy. In other words, one of the aims is to learn what have been the changes in the distribution of income as received directly in return for personal services and for the ownership of property before income is redistributed either by public policy or individual choice. This statement should not be interpreted to mean that public policy does not play an important role in the primary distribution of income and primary distribution might well be qualified by the phrase, within the framework of existing legal and economic institutions.<sup>1</sup> Defining the objective in this manner, no account would be taken of transfers of income from one individual to another or from the State and private organizations to individuals in cases where no services are performed. Nor would there be any deduction of taxes from income.

<sup>1</sup> Some of the ways in which public policy influences the primary distribution of income are briefly indicated in ch. I.

Studies of the distribution of income using this concept of individual income would be of value to persons interested in the distribution of "earning power" or acquired income. The term "earning power" is not altogether satisfactory and no ethical significance should be attributed to its use. Quantitative measures embodying this concept would also provide the factual background for an analysis of the basic economic factors influencing the degree of income concentration, regardless of which concept of income is considered most relevant. This follows from the fact that the distribution of acquired income is fundamental in determining the secondary distributions of income. To summarize the above discussion in terms of specific income items: Income as a measure of individual earning power should be taken before deduction for direct or indirect taxes, gifts, and contributions to charitable organizations. Likewise, gifts, inheritances, and income from free public services should be excluded from the income of recipients. In recent years direct-relief payments should also be excluded from income although as a transfer item it possesses certain unique characteristics which will be discussed at a later point.<sup>2</sup> The Federal income-tax data adjusted for certain deductions and exclusions fulfill to a considerable extent the need for income statistics based on such a concept of individual income. Estimates of the total income of all individuals can be developed which will embody this income concept.

Two concepts of personal income are utilized to measure the concentration of earning power—economic income and statutory net income. The former is more inclusive and closely approximates what is commonly regarded as the total income of an individual less strictly business expenses. Included are such sources of income as wages, salaries, and fees (including wages and salaries paid in kind), pensions, net incomes of independent businessmen, net rents and royalties, profits and losses from the sale of property, dividends, and interest.<sup>3</sup>

<sup>2</sup> See pp. 66-7 of ch. IV. Work-relief wages are included in the total income of individuals when the concentration of earning power is measured. See discussion in ch. IV, pp. 65-6.

<sup>3</sup> There is no necessary identity of the total of individual incomes with the national income. All of the above-mentioned income sources, with the exception of the income from the sale of property, are usually included in the national income. Except insofar as such profits are received by dealers in assets or insofar as they reflect the indirect receipt of undistributed earnings of corporations, this type of gain or loss does not result from an addition to the net value of the goods and services produced—the national income. These gains or losses, however, do influence the shares of the Nation's output of goods and services which individuals may claim and constitute a source from which many individuals may be said to acquire additions to their other income. To an individual, net profits from the sale of property are very much like other current income and may be spent for consumption goods or saved. Therefore, when primary interest lies in the distribution of individual incomes received in return for personal services or made possible through the ownership of property, the inclusion of this type of income seems to be proper. Some part of the income from the sale of property included in the basic statistics represents nominal income occasioned by general changes in prices. However, the inclusion of this type of gain or loss does not appreciably affect the findings of this study.

It should be noted that for purposes other than those of this study, a different treatment of this type of income may be desirable. Thus, if interest lies in the determination of the individual savings available for new investment, the inclusion of realized gains or losses in the income total may yield misleading indications as to the volume of funds (exclusive of funds made possible through bank credit) available for this purpose; and, therefore, the aggregate of total individual income, as given in this study, would have to be adjusted for duplications. From some points of view, it would be desirable to include as individual income unrealized profits or losses due to changes in the value of property. This treatment follows from Robert Murray Haig's definition of income which has as its purpose the measurement of the "money value of the net accretion to economic power between two points of time." If this definition is accepted, the treatment of changes in the value of property used in this study represents a compromise forced by practical difficulties and possible constitutional limitations. A suggested alternative involves the averaging of the realized gain or loss in some way over a period of years determined either by the period the asset was held or by some arbitrary number of years. On the other hand, because of the variability of income from the sale of property, it may be of interest to know the distribution of income excluding this form of income as well as including it.

It is generally appreciated that because of the divergent purposes which income statistics serve, there is no method of treating capital gains or losses that will be satisfactory for all purposes. For a more comprehensive treatment of these matters see *Facing the Tax Problem*, particularly pp. 484-491 (Twentieth Century Fund, New York, 1937); ch. VII of *Personal Income Taxation* by Henry C. Simons (Chicago, 1938); and various discussions in the volumes published by the Conference on Research in National Income and Wealth entitled, *Studies in Income and Wealth*, particularly those by Clark Warburton in vol. I, pp. 97-101, and by Roy Blough and W. W. Hewett in vol. II, pp. 191-263.

The concept of statutory net income is used in parts of this study largely as a substitute for economic income where the latter cannot be derived satisfactorily. It is the product of the income-tax law and as such is not entirely suitable for economic analysis. Statutory net income is defined as the income of an individual after deductions for interest paid, certain types of direct taxes paid, noninsured losses by theft, fire, etc., losses incurred from bad debts, contributions, and a number of miscellaneous deductions. Also excluded from statutory net income are wholly tax-exempt interest on Government obligations and the compensation of State and local government employees which was exempt from income taxation during the period covered in this study. All these items with the exception of the compensation received by State and local government employees are included in economic income. It would have been desirable to utilize the concept of economic income throughout the study but the nature of the basic source material made it necessary to use statutory net income for certain years. Wherever possible the data have been adjusted to secure what has been defined as economic income. The statistics on income concentration presented in this chapter are intended to measure the changes in the concentration of earning power.

## 2. *"Purchasing Power."*

Persons interested in the effects of changes in the concentration of income on the expenditures of individuals would use the income concept of "purchasing power" or disposable income. The distribution of purchasing power would show the distribution of current income among those who ultimately dispose of it by consumption or saving. Precise definition of this concept is difficult but some of the major adjustments to the distribution of earning power or acquired income may be indicated. First, most of the direct personal taxes paid out of acquired income should be deducted. Second, the distribution of acquired income should be adjusted, by deductions from the incomes of the donors and additions to the incomes of the recipients, for the transfer of certain types of income among individuals either directly or through charitable organizations. These transfer income items include certain gifts among individuals and contributions to, and payments from, charitable organizations. It may be mentioned that some have argued for the inclusion of gifts as income to the recipient and for no deduction of gifts from the income of the donor, considering gifts as a form of consumption. If gifts were deducted from the incomes of the donors, it would be necessary to define the term carefully. In addition, the distribution of purchasing power is influenced by the receipt of inheritances and insurance benefits, neither of which are included in the measures of acquired income or earning power. Third, direct-relief payments and the veterans' adjusted-service compensation (the soldiers' bonus) should be added to the incomes of the recipients. Chapter IV contains data on the trends in the concentration of purchasing power and a more detailed discussion of the necessary adjustments to income.

## 3. *"Real Income."*<sup>4</sup>

Although no data are presented embodying the concept of "real income," a brief discussion of its meaning may be of assistance in

<sup>4</sup> The term "real income" is employed in a different sense than is usually attached to it in economic and statistical literature. In conventional usage money income after correction for price changes is defined as real income. The term, however, seemed to be also appropriate for use in the present connection.

interpreting the data on the distribution of earning power and purchasing power. For those interested in the distribution of income in the form of money, goods, and services which is at the disposal of individuals after income has been redistributed either by public policy or individual choice, it will be necessary to go beyond the distribution of purchasing power and take into account, first, the incidence by income classes of all taxes, direct and indirect, and second, the receipt by income classes of the benefits of free services furnished by public and private agencies. This would involve net additions to the incomes of some groups in the population and net deductions from the incomes of other groups. Studies based on this income concept would presumably constitute a step in determining the distribution of welfare. Strictly interpreted, the practical application of a concept of income designed to show the distribution of "real income" is apparently beyond the limits of the available information. Before an investigation of the distribution of income from this point of view is feasible, it will be necessary to resolve the theoretical and statistical difficulties involved in determining the incidence of the Nation's tax system on the various income groups and in allocating the benefits of free public and private services among these groups. There are, however, possibilities for fruitful research along these lines. Aside from a few cursory remarks in chapter IV, (p. 58) concerning the incidence of the tax system, this concept of income is not treated in this study.

#### *4. Income Recipient.*

The unit adopted in this report for distributing income is the individual income recipient. The use of this unit follows from the primary purpose of this study which is to measure the concentration of earning power. It is the individual who comes in direct contact with the distributive system and receives an income in return for personal services and for the ownership of property. After receiving their incomes individuals spend them either on an individual, family, or household basis and, therefore, the income-consuming unit may, and usually does, differ from the income-receiving unit. The distribution of purchasing power may be studied at two stages: First, the distribution among those who acquired an income after the indicated adjustments, and, second, the distribution among the consuming units by which the income is spent. The data in chapter IV are based upon the former distribution. The latter distribution is of interest primarily in expenditure or budget studies.

For the purposes of this study the term "income recipient" includes all persons receiving an income as defined above and all employable persons attempting to earn one. During periods of prolonged unemployment the latter group has been numerically important. They support themselves and their dependents by disbursing savings and incurring debts or else through gifts and public or private relief. It will be recalled that these items are not included as income when studying the distribution of earning power. The adoption of this rather broad definition of income recipient is necessitated by the objective of the analysis of income concentration; namely, to develop measures of the concentration of income among persons either receiving or usually receiving an income. It is believed that by using this definition the measures of income concentration would possess greater

significance. Were the study confined only to individuals actually receiving income, the shifts in the concentration of income which may be indicated from years of prosperity to years of depression would be of limited value. Thus it would be possible for income to become more concentrated among individuals normally receiving an income, yet measures of the concentration of income among those individuals actually in receipt of an income might well lead to the conclusion that incomes became less concentrated.

The need for a quantitative measure of the number of income recipients is met reasonably well by the enumeration of persons with gainful occupations in the decennial censuses. Persons classified as gainful workers include all who pursue an occupation though not necessarily employed at the time of enumeration. A person was not classified as gainfully occupied if he usually spent less than 1 day a week at an occupation. Persons retired or incapacitated were excluded. It was necessary to adopt a generally accepted adjustment of 325,000 persons in the 1930 census for an estimated undercount of young people who were omitted from the census enumeration because of a lack of previous work experience. The most serious defect of these data for the purpose of this study is that there undoubtedly are persons receiving income from property or from pensions who are not classified as gainfully occupied. As there seems to be no reason to believe that the proportion of such nongainfully occupied income recipients to the total number of persons with gainful occupations has changed materially during the period under consideration, no estimate, necessarily arbitrary, was hazarded of the number of such income recipients. The trends in income concentration would not be affected if the absolute totals for each year are not precisely accurate. It may be mentioned in this connection, first, that many income recipients without an occupation nevertheless report one to the census enumerator and, second, that the exclusion of these nongainfully occupied income recipients is offset, in part at least, by the inclusion as gainful workers of many part-time workers and children on the borderline of being classified as income recipients. Among these may be mentioned the 1,202,000 gainful workers from 10 to 24 years of age attending schools and 469,000 children on farms under 15 years who were classified in 1930 as gainful workers. Annual estimates of the number of gainful workers have been made by several organizations. The series selected takes into account the changing age composition of the population and immigration and emigration. A further discussion of the data on income recipients particularly with reference to the income tax data will be found in appendix note A-2. (p. 79).

## II. STATISTICS OF INCOME CONCENTRATION, 1918-37

The income concentration statistics in this section are intended to measure the concentration of earning power. The method adopted for measuring the concentration of earning power involves determining the proportions or shares of the total income of all individuals received by fixed percentages of the Nation's income recipients.<sup>5</sup> In view of the relatively high exemptions of the Federal income-tax law, it is possible to measure at the most the share of the total income received

<sup>5</sup> For some comments on methods of measuring income "inequality" and concentration, see appendix note B-3, p. 104.

by the highest 2 percent of income recipients. Much interest is generally attached to evidence of changes in the shares of the total individual income received by the various proportions of the higher income recipients. As a relatively small proportion of income recipients in the high-income brackets largely determine the volume of personal or noncorporate saving, this is particularly true in connection with questions involving the ratio of saving to consumption, discussions of which have occupied a prominent position in the analysis of the factors determining the size of the national income.

### 1. *The Highest 1 Percent of Income Recipients.*

Table 1 shows the shares of the total individual income received by the highest 1 percent of income recipients from 1918 through 1937. The study begins with the year 1918 because this was the first year the income-tax statistics were considered comparable with those for the following years.<sup>6</sup> It ends in 1937 as statistics on the higher incomes are not yet available for 1938 and 1939.

Income is economic income as defined. The income tax data, which are the source of information on the higher incomes, were adjusted in various ways and several items were estimated in order to arrive at a comparable and complete concept of income. The detailed procedures are described in appendix note A-1. The legal definition of income has been changed several times during this period. For the years 1918 through 1931 and the year 1934, the measures of income concentration are based on a comparable income concept. An important change in the definition of income occurred in 1932 and again in 1934. These changes in the law concern the treatment of realized capital gains and losses. For 1932 and 1933, losses from the sale or exchange of stocks and bonds held 2 years or less were limited to gains from such transactions. As it was not possible to adjust the data so as to make them comparable with the preceding or following years, no data are presented in table 1 or subsequent tables for these 2 years.<sup>7</sup>

<sup>6</sup> The Federal individual income-tax law has been in effect continuously since Mar. 1, 1913. In view of the questionable reliability of the statistics for the years prior to 1918, the comparatively small number of persons filing income-tax returns, the changes in the definition of income and in the manner in which the statistics were tabulated, no measures of income concentration are presented for these years.

The questionable reliability of the data is largely due to the initial difficulties of enforcement. At least several years were required before the meaning of such a comprehensive and complex law was developed and the enforcement machinery organized. The data for these early years are examined in considerable detail in chs. 22 and 30 of *Income in the United States*, vol. II, published by the National Bureau of Economic Research. In this book both O. W. Knauth and F. R. Macaulay conclude that the income-tax data are considerably more accurate for 1918 than for the preceding years. The practice of requiring employers to report the amounts over \$1,000 paid to employees was instituted in 1918 and this probably led to a considerable improvement in the accuracy of the statistics. Prior to 1917 the exemptions were quite high, especially when the prevailing level of incomes is taken into account, and consequently the number of returns filed was comparatively small. The exemptions were \$4,000 for married persons and \$3,000 for single persons. In 1917 the exemptions were lowered to \$2,000 and \$1,000, respectively, for married and single persons. As the level of income was higher beginning in 1917, the coverage of the total distribution of income was even larger than the difference in exemptions suggests.

From 1913 through 1915 losses sustained in transactions entered into for profit but not connected with business or trade were not deductible. In 1916 and 1917 such losses were deductible to the extent of the aggregate income from such transactions. In 1918 and subsequent years until 1932 such losses were completely taken into account in one form or another. In addition to these specific items there were numerous refinements of the definition of income during this early period of experimentation. Prior to 1916 little detail was published. However, in 1916 the data were tabulated in a way as to render them incomparable with preceding or succeeding years. The net income of returns filed separately by husband and wife was combined and the total was classified as one return. Failure to note this unique method of tabulation has resulted in questionable conclusions concerning the pre-war concentration of income. Contributions to charitable and scientific organizations, etc., not exceeding 15 percent of the net income before deducting the contributions with certain exceptions, were deductible in 1917 and subsequent years. However, in 1917 contributions were tabulated with net income in contrast to later years when contributions were excluded from net income.

<sup>7</sup> See, however, footnote 11, p. 16, which presents data for 1932.

Beginning in 1934 varying proportions of gains and losses were included in net income depending on the length of time the asset was held and losses were limited to \$2,000 in excess of gains. The definition of capital asset was also broadened slightly. With the use of a special tabulation of actual realized capital gains and losses for 1934 made available by the Treasury Department, it was possible to adjust the basic data on the higher incomes for 1934 so as to make them comparable to the preceding years. The data for 1935, 1936, and 1937 could not be corrected. The second measure of income concentration for 1934 and the measures for 1935 to 1937 are therefore, not strictly comparable with the measures for the preceding years. As is readily seen by comparing the two figures for 1934, the measures of income concentration for the period 1934-37 slightly overstate the degree of income concentration.<sup>8</sup>

In interpreting the data it is important to note that the level of the percentages represents an understatement for each year of the proportion of total individual income received by the highest 1 percent of income recipients. This consistent understatement does not diminish the value of the data for the present purpose, which is to determine the year-to-year changes in degree of income concentration. The understatement arises largely from the fact that the data on the higher incomes have been used without correction for nonreporting or underreporting of income to the income-tax authorities. It is generally believed that underreporting and nonreporting of income does exist and, therefore, the given percentages do not purport to show the actual degree of concentration for any year. It was not thought feasible to attempt to correct the data as any adjustment would necessarily be largely arbitrary. This understatement was offset in small part by the manner in which the salaries and wages of State and local government employees were treated. Their salaries and wages were exempted from Federal income taxation during the period covered and hence from the basic data on the higher incomes. It was found expedient for various reasons to exclude the employees of State and local governments and their compensation from the other data upon which the measures of income concentration are based. The exclusion of this group does not significantly affect the movement of the indexes of concentration and they may be taken as indicative of changes in the concentration of income among all income recipients.

For those interested in an estimate of the actual degree of concentration of income for a given year, the following data may be cited from two studies which had this as their purpose. In a study for 1929 by the Brookings Institution it was estimated that the highest 1 percent of income recipients received about 24 percent of total individual income.<sup>9</sup> The comparable percentage for 1929 in table 1 is 18.5. For 1918 it was estimated by the National Bureau of Economic Research that the highest 1 percent of income recipients received 13.7 percent of

<sup>8</sup> In addition the extent of overstatement varies slightly from year to year in the following order of importance: 1934 or 1937, 1935, and 1936. The characteristics of the data for these years are described in some detail in appendix note B-2. The directions of the changes in income concentration from 1934 through 1937, however, are correctly shown by the data in table 1. See appendix note B-2 and text below for interpretation of changes in income concentration during these years.

<sup>9</sup> M. Leven, H. G. Moulton, and C. Warburton, *America's Capacity To Consume*, Washington, D. C. 1934, p. 207. The estimate of the distribution of income by size is credited to Maurice Leven.

the total individual income. The comparable percentage in table 1 is 12.8.<sup>10</sup>

TABLE 1.—*Shares of total individual income received by the highest 1 percent of income recipients, 1918-37*<sup>1</sup>

Year	Percent of total income received by highest 1 percent of income recipients	Index (1918=100)	Minimum incomes of highest 1 percent	Year	Percent of total income received by highest 1 percent of income recipients	Index (1918=100)	Minimum incomes of highest 1 percent
1918.....	12.79	100.00	\$6,385	1928.....	19.26	150.59	\$10,140
1919.....	13.35	104.38	7,910	1929.....	18.47	144.41	9,975
1920.....	12.42	97.11	8,010	1930.....	14.63	114.39	8,080
1921.....	13.57	106.10	6,845	1931.....	13.72	107.27	6,595
1922.....	14.24	111.34	7,445	1934.....	12.66	98.98	5,375
1923.....	12.95	101.25	7,505	1934.....	13.03	101.88	5,375
1924.....	14.17	110.79	8,040	1935.....	13.41	104.85	5,800
1925.....	16.39	128.15	9,380	1936.....	14.53	113.60	6,880
1926.....	16.21	126.74	9,655	1937.....	13.29	103.91	6,940
1927.....	17.18	134.32	9,590				

<sup>1</sup> Economic income. The 1934 figure of 12.66 percent is comparable to percentages for the preceding years. The second percentage for 1934 and the percentages for 1935-37 are slightly overstated relative to the preceding years due to a change in the income concept. For comparability of the data for 1934-37 see text and appendix note B-2. Total individual income for 1934-37 includes work-relief wages.

Source: See appendix note A-1.

It should be noted that the statistics presented in this study show the concentration of income each year. No information is presented concerning the year-to-year stability of the incomes of identical individuals. That is, the extent to which individuals maintain their relative position in the income distributions of different years. This aspect of the concentration of income is obviously important, but it has not received the attention it deserves largely because of the lack of adequate information.

*Changes in income concentration.*—For the years covered by the data the degree of income concentration, as measured by the income shares received by the highest 1 percent of income recipients, was lowest in 1920 and 1934 and highest in 1928.<sup>11</sup> There has been no significant trend over the period as a whole. The level and the extent of variation in the degree of income concentration was about the same during recent years, 1934 through 1937, as during the years 1918

<sup>10</sup> W. C. Mitchell, W. I. King, F. R. Macaulay, and O. W. Knauth, *Income in the United States*, vol. I, New York, 1921, p. 133. The individual distribution is the work of F. R. Macaulay. It should be noted that each investigator applied different correction factors to the income-tax data. The differences between the corrected and uncorrected percentages for the 2 years, therefore, represent in part differences in judgment as to the degree to which the higher incomes are understated in the income-tax data of each year.

The two figures for 1918 are based on data including the military personnel. Dr. Macaulay has estimated that there were 2,500,000 soldiers, sailors, and marines who had little, if any, income beyond the pay, food, and clothing provided by the Government which he valued at \$700 per man (op. cit., p. 131). If these men and their incomes are excluded from the data, the figure corresponding to that in table 1 of this study is 12.9 percent and to that from the National Bureau study is 13.8.

<sup>11</sup> No measures of income concentration were presented in table 1 for the years 1932 and 1933 due to the effect on the income tax statistics of the change in the law limiting losses from the sale or exchange of stocks and bonds held 2 years or less to the profits from such sales. However, it is virtually certain that the concentration of income continued to decline in 1932. Based on the concept of income embodied in the income tax law effective in 1932, the share of the total individual income received by the highest 1 percent of income recipients, in terms of *statutory net income*, was 10.11 percent. If realized losses from the sale of property were fully included as income, the share of total individual income received by the highest 1 percent of income would doubtless be less than this figure. As the percentage share of 10.11 for 1932 is expressed in terms of *statutory net income*, it should be compared with the percentages in table 2, where it is shown that the percentage of total income received by the highest 1 percent of income recipients was 11.27 in 1931 and 10.20 in 1934. The degree of income concentration, therefore, probably reached a minimum in 1932. It seems that the income share of the highest 1 percent of income recipients in 1932 was about the same size as in 1920 when the income share based on *statutory net income* was 10.05 percent.

through 1924. The average share of total income received by the highest 1 percent of income recipients was 13.36 percent for the years 1918 through 1924 and 13.56 percent for the years 1934 through 1937.<sup>12</sup> The maximum and minimum income shares for the early period were 14.24 percent in 1922 and 12.42 percent in 1920 and for the latter period 14.53 percent in 1936 and 12.66 percent in 1934. In contrast to comparative stability of the income shares during these two periods, the period 1925 through 1932 witnessed wide fluctuations in the size of the shares of income received by the highest 1 percent. The income share received by the highest 1 percent of income recipients in 1928 was more than one-third larger than in 1924 and the share received in 1932 was more than one-third less than in 1928. Apart from minor variations associated with short cyclical movements in business activity, the concentration of income increased from 1921 through 1928 with most of the increase taking place after 1924. After 1929 income concentration declined sharply, reaching a minimum in 1932 and 1933. The concentration of income then increased from 1934 through 1936 and declined in 1937.

Table 1 also shows the income level above which the highest 1 percent of income recipients were located each year. The income levels are also understated because no account was taken of underreporting and nonreporting of incomes to the Bureau of Internal Revenue. In the estimate previously cited for 1918 the income level for the highest 1 percent was \$7,700 as compared with \$6,385 in table 1. In the Brookings estimate for 1929 the income level was \$12,850 and in table 1, \$9,975. During the period covered by the data the minimum income of the highest 1 percent of income recipients has been subject to marked fluctuations. In 1934 anyone with an income in excess of \$5,375 was among the highest 1 percent of income recipients, whereas in 1928 an income of \$10,140 or more was necessary for inclusion in this category. These variations reflect, in large part, the movements in the level of prices and incomes as well as the shifts in the degree of income concentration. Evidence of changes in the minimum incomes of the highest 1 percent of income recipients reveals the fallacy of taking the proportions of total income received in each year by individuals with incomes above a fixed amount as indicative of changes in the degree of income concentration. During periods of changing price and income levels, this procedure, which has sometimes been adopted, will yield misleading results.

*Business activity and income concentration.*—While it is not the present purpose to undertake an analysis of factors responsible for the indicated changes in the degree of income concentration, the more obvious trends and their relationships to broad economic movements will be outlined. Chart I presents in graphic form the data in table 1, the size of the total income per income recipient (deflated roughly to eliminate the influence of price changes), and the turning points of the short business cycle, as defined by the National Bureau of Economic Research. This chart serves the purpose of relating the changes in the concentration of income to the size of the total income and to general business conditions. The changes in the magnitude of the

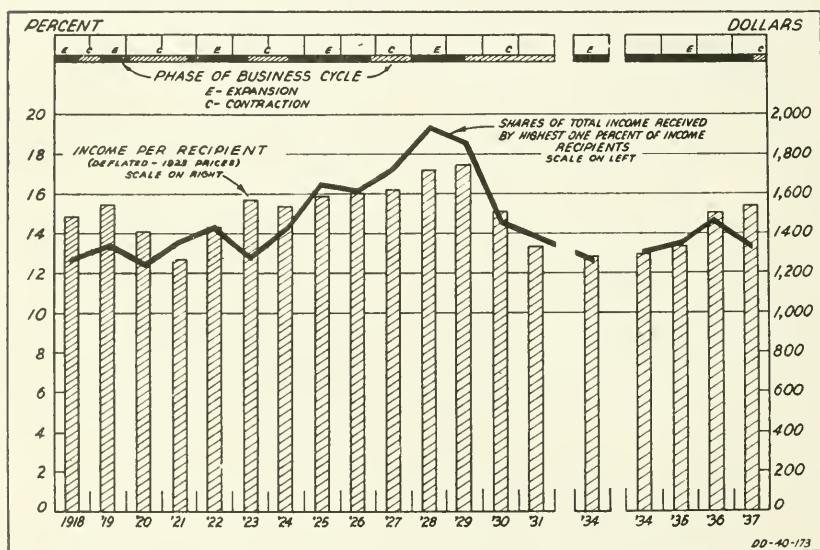
<sup>12</sup> Because of the limitations on the deductibility of realized capital losses the percentages for the latter period are slightly overstated. Therefore, the two averages are probably more nearly equal than is indicated by the figures.

total income per recipient may also be taken as indicative of the amplitude or intensity of the cyclical movements.

The chart reveals in striking fashion that the changes in degree of income concentration as measured by the proportion of total income received by the highest 1 percent of income recipients have conformed to a cyclical pattern. Income concentration increased during periods of business expansion and declined during periods of business contraction. The only exception was the slight contraction in business activity during 1927 which was not severe enough to produce a decline in total income or in the index of income concentration. As the income accounting period is the calendar year, the relationship between

CHART I

CONCENTRATION OF INCOME AND TOTAL INCOME PER RECIPIENT, 1918-37



Source: Income shares from Table 1. Income per recipient was obtained by deflating Total Income, as given in Table 10, by the cost-of-living index of the National Industrial Conference Board and dividing the deflated Total Income by the number of income recipients, as given in Appendix Table A-4. Data on turning points in the business cycle, except in 1937, from Bulletin 69 of the National Bureau of Economic Research.

NOTE.—The income shares understate for each year the proportion of total income received. See text and footnotes to Tables 1 and 10.

income concentration and business conditions is somewhat obscured. If the income accounting period coincided with the phases of the business cycle, the relationship between business activity and income concentration would be more impressive and the fluctuations in income concentration would probably be somewhat larger.

There has been a marked tendency for the degree of income concentration to vary with the size of total income per income recipient. High income concentration has been associated with a large income per recipient and low income concentration with a small income per recipient. This is clearly shown by the chart. Measured on a calendar-year basis the degree of income concentration has been more sensitive to changes in business activity than to changes in the size

of total income. A rise or decline in business activity during the closing months of a year was generally accompanied by a rise or decline in income concentration. As will be shown in chapter III this close correlation is traceable in large part to the highly variable source of income, profits and losses from the sale of property. The absolute amounts of annual total income were not so susceptible to these changes in business activity though the rises or declines in business activity during the closing months of a year did influence, of course, the rate of increase or decrease in annual total income. Thus, income concentration rose but total income declined in 2 years—1921 and 1924. In both of these years there was an expansion of business activity during the latter part of the year. Income concentration declined and total income rose in 4 years—1923, 1926, 1929, and 1937. In each of these years a decline in business activity set in during the latter part of the year. Were the income accounting periods determined by the rises and declines in volume of income, measured on a monthly basis, the above-noted lack of correspondence between increases and decreases in total income and in the degree of income concentration would largely disappear. The analysis presented in chapter III of the relation between the concentration of income and the composition of incomes will throw further light on some of the factors responsible for the shifts in income concentration.

The relationships between changes in income concentration, total income, and business activity will, perhaps, be brought out more clearly by a brief year-by-year summary of the changes in income concentration. In 1919, the year of the short-lived post-war prosperity, total individual income rose as did the degree of income concentration. During 1920 business conditions experienced a severe and rapid contraction. Total income declined and the share received by the highest 1 percent was less than in the previous year. In 1921 a decline in total income from the 1920 level was associated with an increase in the income share of the highest 1 percent of income recipients. However, business conditions, which were depressed in 1920 and most of 1921, began to improve during the closing months of the latter year. In 1922 there was an increase in total income and in the concentration of income. The year 1923 was one during which the total income rose sharply, but the share of the total income received by the highest 1 percent of income recipients declined. Though both the national income and total individual income showed substantial increases in 1923, the latter half of the year was characterized by a contraction in general business activity. In 1925, a year of rising income, the increase in income concentration was the largest, both in percentage and absolute terms, of any of the years covered. The slight contraction in business activity during 1927 was not sufficiently severe to produce a decline in either the size of the total income or in the index of income concentration. During the years of high business prosperity, 1928 and 1929, total individual income and the degree of income concentration reached the highest level of any of the years which the data include. The share of the total income received by the highest 1 percent of income recipients in 1928 was larger than in 1929. Again it may be noted that while the total individual income and the national income were larger in 1929 than in 1928, the latter part of 1929 was a period of declining business activity. The period

from 1922 through 1929 may be considered as the expansion phase of a long business cycle and the concentration of income increased, apart from minor variations, with the rising amplitude of the cycle.

During the depression beginning in 1929 income concentration experienced a sharp decline from the peaks of 1928 and 1929 and reached a minimum in 1932 and 1933. This drop was paralleled by a diminishing total income. During 1934, 1935, and 1936 the concentration of income increased moderately, with the increase in concentration during 1936 being of largest proportions. While the total income of all individuals in 1937 was greater than in 1936, business conditions declined sharply in the latter half of the year. As was the case in previous years characterized by a sharp reversal in an upward movement of business activity, the income share of the highest 1 percent of income recipients was reduced. In consequence of the income concept used during the years 1934 through 1937, the actual increase in income concentration from 1934 through 1936 was somewhat greater than indicated in table 1 and the deconcentration of income during 1937 was also greater.<sup>13</sup> As noted above, the average income share of the highest 1 percent of income recipients was approximately the same during the years 1918 through 1924 and 1934 through 1937. During these two periods the deflated average income of all income recipients was also approximately the same, \$1,466 for the years 1918 through 1924 and \$1,419 for the years 1934 through 1937.<sup>14</sup>

## 2. *Selected Proportions of Income Recipients.*

The measures of income concentration presented thus far have been confined to the highest 1 percent of income recipients. Before the data at our disposal are fully exploited, it will be possible to present evidence on the changes in the shares of the total income received by various other proportions of income recipients. Considerable importance is attached to changes in the degree of income concentration within the highest 1 percent and such changes could very well be obscured by considering only the highest 1 percent of the recipients. Furthermore, in order to interpret properly the measures of income concentration for the highest 1 percent, it is necessary to know the distribution of income within this group. The available information enables us to cover at most the highest 2 percent of income recipients and even for this group the estimates are probably not so reliable as those for the smaller proportions of income recipients.<sup>15</sup> The proportions of income

<sup>13</sup> The effect of the peculiar definition of income in use during 1934 through 1937 on the measures of income concentration is analyzed in appendix, note B-2.

<sup>14</sup> Both averages in terms of 1923 prices. The average for the latter period is slightly overstated due to the income concept used for these years. See chart 1.

<sup>15</sup> The most important reason why the income measures for the highest 2 percent of income recipients are probably less reliable than those for the smaller proportions is the fact that the lower the minimum income level for the group of income recipients, the more important is nonreporting and underreporting of income to the Bureau of Internal Revenue. In no year, however, was it necessary to go below the net income for which a return was required by law. In all years except two, the lower limit of the highest 2 percent of income recipients was at least several thousand dollars above the net income for which a return was required by a married person. In 1931, the minimum income level of the highest 2 percent of income recipients was \$3,960, while the net income for which a return was required was \$3,500 for a married person and \$1,500 for a single person or a married person not living with husband or wife. In 1934 the minimum net income level was \$3,275 while the net incomes requiring a return were \$2,500 and \$1,000, respectively.

Another reason of lesser importance is the fact that the data for net incomes under \$5,000 were estimated on the basis of a sample for the years 1918 through 1927 and for 1929; and partly estimated and partly tabulated for 1928, 1930 and subsequent years. For discussion of validity of method used prior to 1928 see *Statistics of Income* for 1928, pp. 19-24. For the minimum net income levels of the highest 2 percent of income recipients see table 4, p. 26.

recipients in terms of which income concentration is measured were selected in order to present a reasonably complete picture of the shifts in the income structure of the Nation within the limits of the available information. With regard to the comparative reliability of the measures of income concentration for the various proportions of income recipients, the measures for the highest 1 percent of income recipients are believed to be the best set of data. This superiority largely arises from limitations of certain necessary adjustments of the income-tax data and certain practices which have developed in connection with the operation of the income-tax law.<sup>16</sup>

*Character of the statistics.*—For the years 1918 through 1925 the income concept used to measure the incomes of these selected groups of income recipients is statutory net income. While it was possible for the years 1918 through 1926 to convert the basic data for the highest 1 percent to economic income with assurance of substantial accuracy, it was not feasible to do so for the other proportions of income recipients.<sup>17</sup> Table 2 contains for the years 1918 through 1931 and 1934 through 1937 the shares of total economic income represented by the statutory net incomes of the selected proportions of income recipients. For the period 1926 through 1931 and 1934 through 1937, estimates are presented in table 3 for the various proportions of income recipients in terms of economic income. The statutory net incomes of the various proportions of income recipients are less than their economic incomes as the former concept does not include the various types of deductions and tax-exempt interest. Therefore, the use of statutory net income results in smaller shares of total income. For example, in 1929 the statutory net income of the highest 1 percent was 16.03 percent of the total economic income (table 2) while the economic income of this group was 18.47 percent of the total economic income (table 3).

<sup>16</sup> See appendix note A-1, pp. 71-2, 75-7, and appendix note B-3, p. 106. In addition to the factors mentioned in these two notes, the measures for the highest 1 percent are more reliable than those for the highest 2 percent for reasons indicated in the preceding footnote.

<sup>17</sup> The principal reason for the inability to present estimates for all proportions of income recipients and all years in terms of economic income was the method followed in the *Statistics of Income* in tabulating the various deductions from total income. For the years prior to 1926, realized capital losses which should be deducted from "total income" to secure economic income were tabulated with other deductions which should be added to net income to obtain economic income. While it was practicable to separate realized capital losses from the other deductions for the highest 1 percent of income recipients, such a separation for the other proportions of income recipients would be subject to considerable error and, as will be shown, is not essential for the present purpose.

## CONCENTRATION OF ECONOMIC POWER

TABLE 2.—*Shares of total individual income received by selected proportions of income recipients, 1918-37*<sup>1</sup>

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
Percentages					
1918.....	14.12	10.82	8.43	4.55	1.65
1919.....	14.49	11.21	8.63	4.47	1.53
1920.....	13.37	10.05	7.54	3.62	1.12
1921.....	14.47	10.80	8.06	3.84	1.16
1922.....	15.46	11.83	9.02	4.56	1.57
1923.....	14.37	10.76	8.20	4.06	1.37
1924.....	15.32	12.02	9.20	4.57	1.54
1925.....	17.86	14.12	11.04	5.88	2.27
1926.....	17.62	13.91	10.81	5.84	2.32
1927.....	18.65	14.82	11.67	6.46	2.60
1928.....	20.68	16.81	13.60	8.05	3.50
1929.....	19.84	16.03	12.94	7.78	3.55
1930.....	16.14	12.35	9.43	4.99	1.97
1931.....	15.33	11.27	8.33	4.06	1.44
1934.....	13.85	10.20	7.61	3.78	1.31
1934.....	14.31	10.61	7.95	3.90	1.30
1935.....	14.77	11.15	8.39	4.18	1.41
1936.....	16.16	12.42	9.49	4.75	1.57
1937.....	14.71	11.15	8.42	4.15	1.37
Indexes (1918=100)					
1918.....	100.00	100.00	100.00	100.00	100.00
1919.....	102.62	103.60	102.37	98.24	92.73
1920.....	94.69	92.98	89.44	79.56	67.88
1921.....	102.48	99.82	95.61	84.40	70.30
1922.....	109.49	109.33	107.00	100.22	95.15
1923.....	101.77	99.45	97.27	89.23	83.03
1924.....	108.50	111.09	109.13	100.44	93.33
1925.....	126.49	130.50	130.96	129.23	137.58
1926.....	124.79	128.56	128.23	128.35	140.61
1927.....	132.08	136.97	138.43	141.98	157.58
1928.....	146.46	155.36	161.33	176.92	212.12
1929.....	140.51	148.15	153.50	170.99	215.15
1930.....	114.31	114.14	111.86	109.67	119.39
1931.....	108.57	104.16	98.81	89.23	87.27
1934.....	98.09	94.27	90.27	83.08	79.39
1934.....	101.35	98.06	94.31	85.71	78.79
1935.....	104.60	103.05	99.53	91.87	85.45
1936.....	114.45	114.79	112.57	104.40	95.15
1937.....	104.18	103.05	99.88	91.21	83.03

<sup>1</sup> Statutory net income of the selected proportions of income recipients. The first group of percentages for 1934 are comparable to those for the preceding years. Except for the highest 1/100 of 1 percent in 1934 through 1937 and the highest 1/10 of 1 percent in 1935 through 1937, the second group of percentages for 1934 and the percentages for 1935-37 are slightly overstated relative to the percentages for the earlier years due to a change in the income concept. The percentages for the highest 1/100 of 1 percent in 1934-37 and the highest 1/10 of 1 percent in 1935-37 are slightly understated relative to the figures for the preceding years. For comparability of data for 1934-37 see text and appendix note B-2. Total individual income for 1934-37 includes work relief wages.

Source: See appendix note A-1.

TABLE 3.—*Shares of total individual income received by selected proportions of income recipients, 1926-37*<sup>1</sup>

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest ⅛ of 1 percent
Percentages					
1926	20.52	16.21	12.60	6.81	2.70
1927	21.54	17.18	13.51	7.50	3.02
1928	23.65	19.26	15.56	9.18	3.94
1929	22.84	18.47	14.89	8.90	4.00
1930	18.99	14.63	11.22	6.00	2.38
1931	18.51	13.72	10.19	5.10	1.88
1934	16.95	12.66	9.57	4.94	1.73
1934	17.41	13.03	9.86	5.03	1.75
1935	17.81	13.41	10.19	5.22	1.81
1936	18.83	14.53	11.17	5.74	1.97
1937	17.37	13.29	10.14	5.15	1.77
Indexes (1926=100)					
1926	100.00	100.00	100.00	100.00	100.00
1927	104.97	105.98	107.22	110.13	111.85
1928	115.25	118.82	123.49	134.80	145.93
1929	111.31	113.94	118.17	130.69	148.15
1930	92.54	90.25	89.05	88.11	88.16
1931	90.20	84.64	80.87	74.88	69.63
1934	82.60	78.10	75.95	72.54	65.19
1934	84.84	80.38	78.25	73.86	64.81
1935	86.79	82.73	80.87	76.65	67.04
1936	91.76	89.64	88.65	84.29	72.96
1937	84.65	81.99	80.48	75.62	65.56

<sup>1</sup> Economic income of the selected proportions of income recipients. The first group of percentages for 1934 are comparable to those for the preceding years. Except for the highest ⅛ of 1 percent in 1934 through 1937 and the highest ¼ of 1 percent in 1935 through 1937, the second group of percentages for 1934 and the percentages for 1935-37 are slightly overstated relative to the percentages for the earlier years due to a change in the income concept. The percentages for the highest ¼ of 1 percent in 1934-37 and the highest ⅛ of 1 percent in 1935-37 are slightly understated relative to the figures for the preceding years. For comparability of data for 1934-37 see text and appendix note B-2. Total individual income for 1934-37 includes work relief wages.

Source: See appendix note A-1.

Aside from the additional degree of understatement, the principal defect of the use of statutory net income for the present purpose is that the statutory net income shares are somewhat more variable than the economic income shares. This difference is readily appreciated by a study of chart II which is drawn on a logarithmic or ratio scale, or by comparison of the two indexes of the percentages of total income received by the highest 1 percent—economic income in table 1 and statutory net income in table 2. The index in table 1 has a minimum of 97.11 in 1920 and a maximum of 150.59 in 1928, while the index of the highest 1 percent in table 2 has a minimum of 92.88 and a maximum of 155.36.<sup>18</sup> The increased variability arises from the fact that the statutory net income is generally a larger percentage of economic income in years of high income concentration than in years of low income concentration. As indicated by a comparison of the measures for the years 1926 through 1937 in tables 2 and 3, the difference between the variability of indexes of income concentration based on statutory net income and economic income increases slightly as the proportion of income recipients becomes smaller. Appendix note B-1 examines in some detail the relationship of statutory net income to economic income for different years and for different proportions of income recipients. The conclusions of this note may be summarized by stating that apart from the differences in the degree of variability both for different years and for the different proportions of income recipients, the data on income concentration in terms of statutory net income will be indicative of the shifts in the concentration of economic income.<sup>19</sup> However, due to the changing ratio of statutory net income to economic income, comparison of the levels of income concentration in 2 years will yield, in several instances, different results according to whether the statutory net income measures or the economic income measures are used. Thus, the statutory net income data of a given year sometimes show a lower degree of income concentration than in an earlier year, whereas the economic income data show a higher degree of income concentration. Comparison of the two measures for the highest 1 percent in 1918 and 1921 provides an illustration of this limitation of the statutory net income data.

A further qualification with regard to the data in tables 2 and 3 should be noted; namely, that for the years 1924 through 1931, the percentages of total income received by the three smaller proportions

<sup>18</sup> The relative mean deviation of the percentages for the years 1918 through 1937 in table 1 is 0.11 and in table 2 (highest 1 percent of income recipients), 0.13. The relative mean deviation is a measure of the relative variability of a series of numbers and is defined as the arithmetic mean of the deviations (disregarding signs) from the arithmetic mean of the original data divided by the arithmetic mean of the original data. Thus, for the data in table 1, the arithmetic mean of the percentages is 14.54; the arithmetic mean of the differences (disregarding signs) between the various percentages and 14.54 is 1.57; the relative mean deviation is, therefore,  $\frac{1.57}{14.54}$  or 0.11.

<sup>19</sup> A factor which may result in a greater variability than is actually the case in the economic income shares received by smaller proportions of income recipients is mentioned in appendix note A-1, pp. 75-7.

of income recipients slightly understate the concentration of income relative to the percentages for earlier years. This understatement is due to the effect on the method of tabulating the income-tax data of an alternative method of treating realized capital losses on assets held over 2 years as a tax credit introduced in the income-tax law in 1924. In the income-tax data individuals were classified according to size of their "statutory net incomes" which did not take account of the losses reported for tax credit. In the adjusted data on the higher incomes used in this study, realized capital losses are fully deducted but some individuals are left in higher income classes than their income permits after deduction of the realized capital losses on assets held over 2 years reported for a tax credit. The understatement of the incomes of the various proportions of income recipients resulting from this procedure is relatively larger for the smaller groups of income recipients. It is negligible for the 1 and 2 percent groups. The understatement is more important in years of large realized capital losses. For a more detailed treatment of this matter see appendix note A-1 (pp. 71-2).

The comments made in connection with the data in table 1 for the highest 1 percent regarding the understatement in the level of the measures of income concentration and the comparability of the data for the years 1934 through 1937 are also applicable to the data in the tables for the selected proportions of income recipients. In addition, the degree of overstatement which characterizes the measures of income concentration for 1934 through 1937 declines in importance for the smaller proportions of income recipients. This is readily seen by comparing the two sets of figures for 1934. There is actually a very slight understatement in the second 1934 figure for the highest one one-hundredth of 1 percent. In 1935, 1936, and 1937 the data for this group and probably for the highest one-tenth of 1 percent group as well are also subject to some understatement.<sup>20</sup> It is necessary, therefore, to exercise considerable care in interpreting the data for the years 1934 through 1937, particularly for the smaller proportions of income recipients. Thus, while the share of total income received by the highest one one-hundredth of 1 percent of income recipients shown in table 2 is the same in 1922 and 1936, the figure for 1936 is known to be somewhat understated relative to that for 1922. The share of total income received by this group in 1936 probably lies between the 1922 figure of 1.57 percent and the 1918 figure of 1.65 percent. On the other hand the 1936 percentage shown for the highest 1 percent of income recipients is known to be somewhat overstated and is less than the share received by this group in 1930 and approximately equal to the share of 12.02 percent received in 1924 by this group.

<sup>20</sup>See appendix note B-2, p. 101, which analyses the data for these years.

TABLE 4.—*Minimum statutory net incomes of selected proportions of income recipients, 1918-37*<sup>1</sup>

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
1918.....	\$3,980	\$5,510	\$8,555	\$26,160	\$106,500
1919.....	4,510	6,760	10,605	31,455	118,000
1920.....	4,615	6,910	10,875	29,945	96,440
1921.....	4,160	5,800	8,990	24,790	79,280
1922.....	4,320	6,235	9,895	28,860	98,930
1923.....	4,380	6,560	10,570	29,825	99,800
1924.....	4,605	7,045	11,480	34,230	118,400
1925.....	4,840	8,130	13,495	40,005	158,100
1926.....	5,030	8,205	13,330	39,365	157,450
1927.....	5,060	8,310	13,600	41,710	182,000
1928.....	5,390	8,820	14,690	48,510	239,750
1929.....	5,380	8,680	14,030	44,750	231,000
1930.....	4,605	6,980	10,705	29,520	119,500
1931.....	3,960	5,660	8,415	21,415	79,950
1934.....	3,275	4,610	6,840	18,250	63,300
1934.....	3,275	4,610	6,840	18,250	63,300
1935.....	3,460	5,005	7,550	20,700	73,100
1936.....	3,900	6,040	9,575	27,700	96,800
1937.....	4,100	6,075	9,415	26,220	90,150

<sup>1</sup> Due to the change in the definition of income after 1934 the income levels for the years 1934 through 1937 are slightly higher than they would be were the data comparable throughout the whole period. In addition the income levels for the 3 smaller proportions of income recipients are somewhat too high for the years 1924 through 1931 owing to the tax-credit method of reporting capital losses on the sale of assets held more than 2 years. See text and appendix note A-1, pp. 71-2.

Source: See appendix note A-1.

TABLE 5.—*Minimum economic incomes of selected proportions of income recipients, 1934-37*

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
1934.....	\$3,775	\$5,375	\$8,105	\$22,240	\$80,755
1935.....	3,990	5,800	8,835	24,735	91,685
1936.....	4,390	6,880	10,965	32,090	116,430
1937.....	4,640	6,940	10,825	30,235	106,650

Source: See appendix note A-1.

Table 4 shows the statutory net income levels which separate the various proportions of income recipients and table 5 shows these levels for the years 1934 through 1937 in terms of economic income. The minimum economic income levels of the highest 1 percent of income recipients are presented in table 1. The income levels which separated the various proportions of income recipients vary significantly during relatively brief periods. Table 5 indicates that in 1934 an individual with a dollar income of \$80,775 would have been included with the highest one one-hundredth of 1 percent of income recipients, while in 1936 it would have required an income 44 percent larger, \$116,430, to be included within the same group. This shift from 1934 to 1936 in the minimum income of this group is a result of the general increase in the level of incomes and the rise in income concentration. Table 6

presents the number of income recipients included within each group of income recipients each year and table 7 contains the average incomes in terms of statutory net income of the various proportions of income recipients. The average economic incomes for the years 1926 through 1937 are presented in table 8.

TABLE 6.—*Number of individuals in the selected proportions of income recipients 1918-37*

Year	Group of income recipients					
	All income recipients <sup>1</sup>	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
1918.....	40,461,000	809,220	404,610	202,305	40,461	4,046
1919.....	40,306,000	806,120	403,060	201,530	40,306	4,031
1920.....	39,975,000	799,500	399,750	199,875	39,975	3,998
1921.....	40,768,000	815,360	407,680	203,840	40,768	4,077
1922.....	41,300,000	826,000	413,000	206,500	41,300	4,130
1923.....	42,064,000	841,280	420,640	210,320	42,064	4,206
1924.....	42,928,000	858,560	429,280	214,640	42,928	4,293
1925.....	43,576,000	871,520	435,760	217,880	43,576	4,358
1926.....	44,209,000	884,180	442,090	221,045	44,209	4,421
1927.....	44,852,000	897,040	448,520	224,260	44,852	4,485
1928.....	45,506,000	910,120	455,060	227,530	45,506	4,551
1929.....	46,169,000	923,380	461,690	230,845	46,169	4,617
1930.....	46,845,000	936,900	468,450	234,225	46,845	4,685
1931.....	47,438,000	948,760	474,380	237,190	47,438	4,744
1934.....	49,260,000	985,200	492,600	246,300	49,260	4,926
1935.....	49,848,000	996,960	498,480	249,240	49,848	4,985
1936.....	50,363,000	1,007,260	503,630	251,815	50,363	5,036
1937.....	50,924,000	1,018,480	509,240	254,629	50,924	5,092

<sup>1</sup> Excludes employees of State and local governments.

Source: See appendix note A-2.

In interpreting the data on income concentration expressed in terms of percentages of total income it is essential to take account of the structure of the distribution underlying the measure of concentration. It will be readily appreciated that identical degrees of income concentration may result from widely different distributions of income. Thus, one distribution with a relatively small income range, for example, up to \$50,000, and another distribution with incomes running into the millions may yield the same measure of income concentration and even the same minimum income level for a group such as the highest 1 percent; yet the significance attached to the identical measures of income concentration derived from these two distributions will obviously be quite different. A further contrast will be provided when the minimum incomes of the two groups of income recipients are not the same. The share of income received during recent years by the highest 1 percent of income recipients will be given a considerably different significance according to whether the minimum income is closer to \$8,000 or \$25,000. The preceding tables presenting minimum income levels, number of income recipients, and average incomes, serve the purpose of disclosing important characteristics of the income distributions. As noted above, the tables on minimum incomes are particularly interesting in this connection in that they indicate in fairly compact fashion the income range and the general distribution within that range. This aspect of the income structure is generally considered along with the degree of concentration as fundamental to an eval-

uation of the manner in which incomes are distributed. The varying relationships in different years between the minimum incomes and average incomes of the selected proportions of income recipients or; in other words, the changes in the structure of the distribution, reflect the shifts in income concentration which will now be considered in some detail.

TABLE 7.—Average statutory net incomes of selected proportions of income recipients, 1918-37 <sup>1</sup>

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
1918.....	\$9,880	\$15,140	\$23,605	\$63,715	\$231,340
1919.....	11,610	17,965	27,665	71,700	245,595
1920.....	11,345	17,060	25,605	61,390	190,095
1921.....	9,430	14,080	21,000	50,090	150,845
1922.....	10,775	16,500	25,165	63,610	218,400
1923.....	11,390	17,060	25,985	64,285	217,545
1924.....	12,030	18,880	28,890	71,700	241,325
1925.....	14,840	23,455	36,670	97,785	376,770
1926.....	14,845	23,435	36,430	98,485	390,635
1927.....	15,520	24,670	38,840	107,485	433,445
1928.....	17,995	29,270	47,360	140,090	608,440
1929.....	17,415	28,135	45,440	136,605	623,130
1930.....	11,785	18,040	27,545	72,900	287,510
1931.....	8,770	12,900	19,060	46,460	164,420
1934.....	6,940	10,235	15,275	37,900	131,345
1934.....	7,270	10,780	16,140	39,645	132,360
1935.....	8,085	12,205	18,355	45,780	153,860
1936.....	10,255	15,765	24,085	60,360	199,565
1937.....	10,025	15,190	22,935	56,615	186,565
Indexes (1918=100)					
1918.....	100.00	100.00	100.00	100.00	100.00
1919.....	117.51	118.66	117.20	112.53	106.16
1920.....	114.83	112.68	108.47	96.35	82.17
1921.....	95.45	93.00	88.96	78.62	65.20
1922.....	109.06	108.98	106.61	99.85	94.41
1923.....	115.28	112.68	110.08	100.89	94.04
1924.....	121.76	124.70	122.39	112.53	104.32
1925.....	150.20	154.92	155.35	153.47	162.86
1926.....	150.25	154.79	154.33	154.57	168.86
1927.....	157.09	162.95	164.54	168.70	187.36
1928.....	182.14	193.33	200.64	219.87	263.00
1929.....	176.27	185.83	192.50	214.40	269.36
1930.....	119.28	119.15	116.69	114.42	124.28
1931.....	88.77	85.20	80.75	72.92	71.07
1934.....	70.24	67.60	64.71	59.48	56.78
1934.....	73.58	71.20	68.38	62.22	57.21
1935.....	81.83	80.61	77.76	71.85	66.51
1936.....	103.80	104.13	102.03	94.73	86.26
1937.....	101.47	100.33	97.16	88.86	80.65

<sup>1</sup> The second set of averages for 1934 and those for 1935-37 are slightly overstated relative to the averages for the preceding years. See text and appendix note B-2.

Source: Averages calculated from data in table 6 and appendix table A-1.

TABLE 8.—Average economic incomes of selected proportions of income recipients, 1926-37<sup>1</sup>

Year	Group of income recipients					
	All income recipients <sup>2</sup>	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
1926.....	\$1, 670	\$17, 285	\$27, 315	\$42, 445	\$114, 820	\$454, 650
1927.....	1, 650	17, 925	28, 590	44, 960	124, 855	502, 785
1928.....	1, 725	20, 555	33, 535	54, 175	159, 735	686, 660
1929.....	1, 740	20, 050	32, 420	52, 285	156, 295	702, 620
1930.....	1, 460	13, 865	21, 360	32, 765	87, 650	347, 280
1931.....	1, 160	10, 595	15, 705	23, 315	58, 415	215, 430
1934.....	1, 015	8, 500	12, 700	19, 200	49, 535	176, 210
1934.....	1, 030	8, 840	13, 235	20, 035	51, 115	177, 225
1935.....	1, 105	9, 750	14, 675	22, 300	57, 175	197, 595
1936.....	1, 275	11, 955	18, 420	28, 355	72, 870	249, 800
1937.....	1, 365	11, 830	18, 105	27, 630	70, 105	241, 165
Indexes (1926=100)						
1926.....	100. 00	100. 00	100. 00	100. 00	100. 00	100. 00
1927.....	98. 80	103. 70	104. 68	105. 93	108. 74	110. 59
1928.....	103. 17	119. 08	122. 78	127. 65	139. 12	151. 03
1929.....	104. 25	115. 99	118. 71	123. 19	136. 12	154. 54
1930.....	87. 43	80. 20	78. 19	77. 19	76. 34	76. 38
1931.....	69. 42	61. 28	57. 49	54. 93	50. 88	47. 38
1934.....	60. 80	49. 16	46. 50	45. 24	43. 14	38. 76
1934.....	61. 52	51. 14	48. 46	47. 21	44. 52	38. 98
1935.....	66. 13	56. 40	53. 73	52. 54	49. 80	43. 46
1936.....	76. 18	69. 16	67. 45	66. 80	63. 46	54. 94
1937.....	81. 74	68. 44	66. 28	65. 10	61. 06	53. 04

<sup>1</sup> The second set of averages for 1934 and those for 1935-37 are slightly overstated relative to the averages for the preceding years. See text and appendix note B-2.

<sup>2</sup> For these averages employees of State and local governments are included in all income recipients.

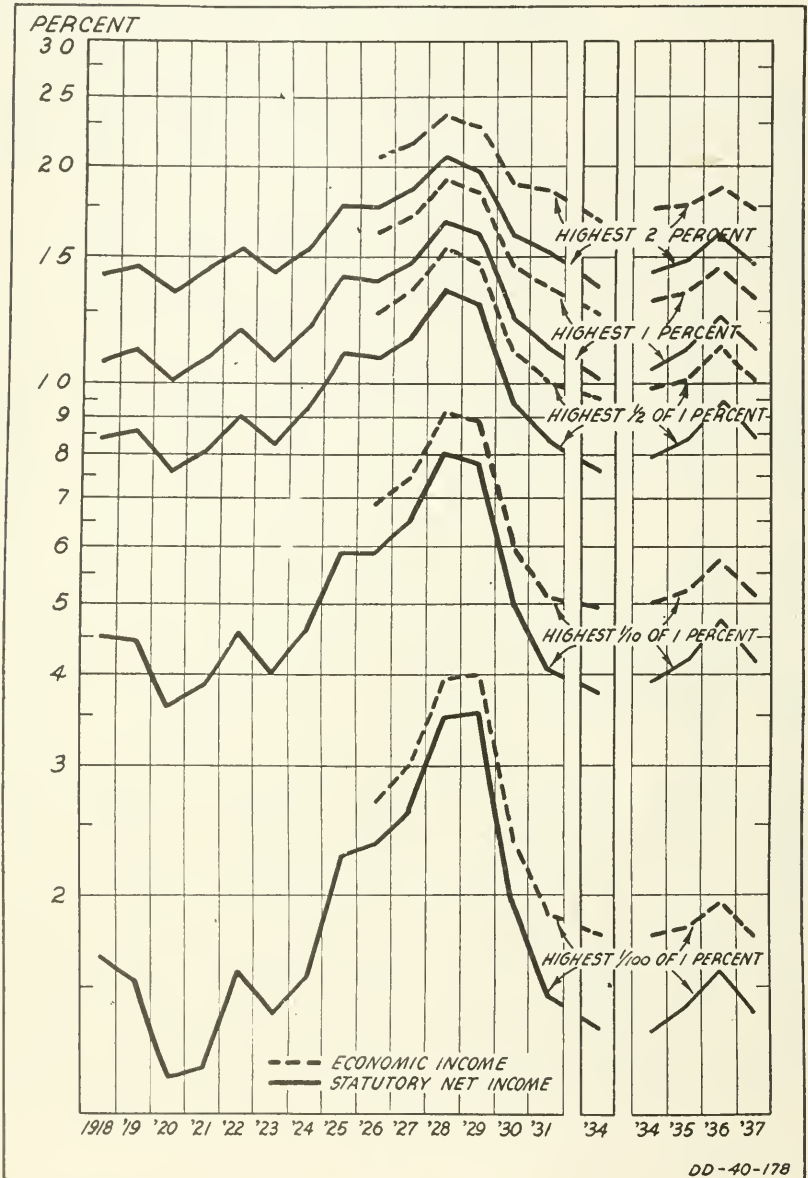
Source: Averages of selected proportions of income recipients are calculated from table 6 and appendix table A-2. Averages for all income recipients are calculated from total individual income as given in table 10 and data in appendix table A-4.

*Changes in income concentration.*—Tables 2 and 3 and chart II reveal that the changes in the degree of income concentration among the various proportions of income recipients follow for the most part the same general pattern as the highest 1 percent of income recipients. However, significant differences in both the relative importance of the changes in the degree of income concentration and in the direction of year-to-year changes are indicated among the various income groups. As the vertical scale of chart II is logarithmic, the chart shows not only the direction of the year-to-year changes but also the relative importance of these changes for the various income groups. The indexes in tables 2 and 3 are also useful in comparing the various proportions of income recipients with respect to the relative importance of the indicated changes in the income shares.

CHART II

SHARES OF TOTAL INDIVIDUAL INCOME RECEIVED BY SELECTED PROPORTIONS  
OF INCOME RECIPIENTS, 1918-37

(Logarithmic scale)



Source: Tables 2 and 3.

NOTE.—The vertical scale is logarithmic; therefore, equal vertical distances represent equal percentage changes. The continuous lines from 1918 through 1931 represent the shares that the *statutory net incomes* of the selected proportions of income constitute of total individual income and the broken lines from 1926 through 1931 and from 1934 to 1937 represent the shares that the *economic incomes* of the selected proportions of income recipients constitute of total individual income. See footnotes to Tables 2 and 3.

Focusing attention first upon the broad movements, it is readily seen that the share of the total income received by the three larger proportions of income recipients was higher in 1919, 1922, and 1924 than in 1918. In contrast, the shares of the two smaller groups did not exceed the 1918 level until 1925. Thus, it is interesting to note that the war year of 1918 was characterized by a higher degree of income concentration among the two highest income groups (those with statutory net incomes above \$26,160) than the immediately following years. On the other hand, the highest 2 percent group received a smaller income share in 1918 than in the immediately following years, with the exception of 1920.

After 1924 the shares of the smaller proportions of income recipients increased relatively more than those of the larger proportions. The share of total income received by the highest one one-hundredth of 1 percent in 1928 and 1929 was more than twice as large as in 1924 whereas the share received by the highest 2 percent of income recipients was only slightly more than one-third larger than in 1924. The year 1925 witnessed the greatest percentage increases in the shares received by all proportions of income recipients. The increases varied from 17 percent for the highest 2 percent of income recipients to 47 percent for the highest one one-hundredth of 1 percent.

The shares of total individual income received by the various proportions of income recipients declined sharply after 1929. The smaller the proportion of income recipients, the larger was the relative decline in its share of total income. After receiving a share of the total individual income in 1928 and 1929 which was twice that of 1918 and three times as large as the previous low of 1920, the share of total income received by the highest one one-hundredth of 1 percent was reduced in 1934 to 80 percent of the 1918 share. The decreases in the shares of total income received by the highest one one-hundredth of 1 percent and the highest one-tenth of 1 percent of income recipients were especially large in 1931. In 1934 all proportions of income recipients had shares of the total income less than in 1918 but larger than 1920, the year when the degree of income concentration was least. During 1935 the shares of income received by the various proportions of income recipients experienced a fairly uniform increase. In 1936 a more substantial increase in income concentration took place. The indicated increases in the income shares varied from 10 percent for the highest one-tenth of 1 percent of income recipients to 6 percent for the highest 2 percent of income recipients. During 1937 a decline in income concentration occurred and the various proportions of income recipients received income shares of about the same size as in 1934. The actual increases in income concentration during 1935 and 1936 and the decrease in income concentration during 1937 were somewhat more substantial than indicated in table 3 because of the differences in the extent to which the data for each year overstate the degree of income concentration.

It is evident from the above description of the broad movements in income concentration that there are significant differences among the various proportions of income recipients in the shifts in income concentration over the period covered. These differences are more marked between the most inclusive and the least inclusive groups of income recipients, but the differences become more important as the groups of income recipients vary in size. Probably the most impor-

tant difference between the various proportions of income recipients lies in the variability of the shares of income received by them. The smaller the proportion of income recipients, the more variable has been the share of income.<sup>21</sup> As is shown in appendix note B-1, only a small part of this difference in variability is accounted for by the use of statutory net income as the income concept. The following table shows the percentage increases in the shares of total income from the year of lowest to the year of highest concentration.

TABLE 9.—*Percentage increases in shares of total individual income from year of lowest to year of highest income concentration*

Group of income recipients	Year of lowest concentration	Year of highest concentration	Percentage increases
Highest 2 percent.....	1920	1928	54.7
Highest 1 percent.....	1920	1928	67.3
Highest one-half of 1 percent.....	1920	1928	80.4
Highest one-tenth of 1 percent.....	1920	1928	122.4
Highest one one-hundredth of 1 percent.....	1920	1929	217.0

Source: Percentages computed from data in table 2, p. 22.

The variability of income shares received by the highest 2 percent of income recipients is due in large part to the fact that this group includes the smaller proportions of income recipients whose income shares fluctuate markedly. Thus, if we are interested in the changes in the income shares received by the "upper middle class," it would be necessary to calculate the share of income received each year by those falling between the lower limit of the highest 2 percent and the lower limit of the highest one-half of 1 percent. This group has been located between the statutory net incomes of \$3,275 and \$6,840 in a low-income year such as 1934 and \$5,390 and \$14,690 in the high-income year, 1928. In contrast to an increase of over one-half in the income share of the highest 2 percent from 1920 to 1928 (table 9), the share of the "upper middle class" rose by but slightly more than one-fifth during this period (calculated from data in table 3). The decline from 1928 to 1934 was also much less, being slightly over one-ninth as compared with a decline of one-third in the share received by the highest 2 percent of income recipients. It is readily evident that if the income groups are compared in this fashion—that is, exclusive of the groups above them—the contrast in the relative variability of the income shares received would be much greater than shown in preceding income concentration tables.

Another difference between the various proportions of income recipients lies in the direction of the year-to-year changes in the degree of income concentration. These differences in direction are not as characteristic as the similarity in the year-to-year movements, but divergent shifts in income concentration have taken place. In 1919 the three largest proportions of income recipients received larger

<sup>21</sup> The relative mean deviations of the income shares are—

Highest 2 percent of income recipients.....	0.11
Highest 1 percent of income recipients.....	.13
Highest one-half of 1 percent of income recipients.....	.15
Highest one-tenth of 1 percent of income recipients.....	.20
Highest one one-hundredth of 1 percent of income recipients.....	.31

Source: Computed from data in table 2, p. 22.

shares of the total income than in 1918, whereas the highest one-tenth of 1 percent and the highest one one-hundredth of 1 percent of income recipients received smaller shares than in the previous year. The share of the highest one one-hundredth of 1 percent was 7 percent less while the share of the highest 1 percent was about 4 percent larger. The changes in income concentration during 1921 departed from the general pattern of increased variability for the less inclusive proportions of income recipients, the smaller groups not experiencing increases in their shares of total income as great as the larger proportions of income recipients. In 1926 the shares of all proportions except the highest one one-hundredth of 1 percent declined. The latter group received a share which was slightly larger than the previous year. In 1929 the income shares of all proportions except the smallest declined. While the shares of total income received by the four largest proportions of income recipients declined twice during the period 1924 through 1929, the share received by the highest one one-hundredth of 1 percent of income recipients increased in each of these years. After 1929 the income shares of all groups dropped sharply, the groups of income recipients with the largest incomes experiencing the most severe reduction in their shares. The decrease in the income shares was larger for 1930 than for 1931.

The change in the income shares of the various proportions of income recipients from 1930 to 1931 is of special interest. The share of total income received by the highest 2 percent of income recipients was almost the same in the 2 years (18.99 percent in 1930 and 18.51 in 1931, see table 3) yet the shares received by the four smaller proportions of income recipients declined considerably.<sup>22</sup> The decreases in the income shares of other proportions of income recipients were, beginning with the smallest group: 21, 15, 9 and 6 percent. The shift in income concentration in 1931 serves to illustrate the danger of assuming that changes in the degree of income "inequality" among the higher-income recipients are always indicative of changes in the entire distribution. In this instance the highest 2 percent of income recipients received shares of approximately the same size in 2 successive years yet the distribution of income within this group was considerably different in each of the 2 years.

<sup>22</sup> The actual declines were somewhat less than shown as the shares of the three smaller proportions of income recipients are understated more in 1931 than in 1930. The shares of the highest 1 and 2 percent of income recipients are probably correct for each year as given. See appendix note A-1, p. 71-2.



## CHAPTER III

### THE COMPOSITION OF INCOME: 1918-37

#### I. INTRODUCTORY

In the preceding chapter, attention was directed to the shares of the Nation's total income received by selected proportions of income recipients. In order to increase our understanding of the process of income distribution, we may probe beneath this distribution of the total individual income by shares and inquire as to how the various types of income such as salaries, dividends, and interest were combined to produce these income shares. This approach from the viewpoint of the sources of income immediately suggests a series of interesting questions. What has been the difference between the composition of the incomes of all income recipients and of the proportions whose shares have been measured? Has this difference been stable or has it been subject to variation as business conditions change? Has there been a shift over the past two decades relative to the importance of the various types of income received by the higher income groups? How have the increases and decreases in the various income streams been reflected in the income composition of the different groups of income recipients? What has been the degree of concentration among individuals of each type of income and how has this concentration varied from year to year?

Turning from a descriptive to an analytical approach, the problem arises of relating these questions to the degree of income concentration and the fluctuations therein. With this shift in interest the questions may be rephrased as follows: What has been the effect of changes in the magnitude of the various income streams on the degree of income concentration? For example, what changes in income concentration have taken place during the years when an income source which is highly concentrated or, in other words, unequally distributed, increased more than total income? Which types of income have contributed most to the concentration of income and to the changes in income concentration? When the answers to these questions have been discovered, the first steps will have been taken toward understanding the factors responsible for the shifts in income concentration outlined in the preceding chapter.

The questions on the composition of personal incomes have been framed largely with reference to one aspect of these statistics; namely, their relation to the subject of income concentration. The statistical information presented in this chapter is interesting on its own account and in connection with broader questions of business cycle analysis dealing with the flow of income through the economic system. Students of income taxation may be interested in the information in connection with variable rates of taxation for different types of income. Some types of income are regarded as being socially more beneficial than others and the taxation of certain sources has less of a depressing effect on the volume of business activity. Also, as will be indicated, some types of income are associated with an increase in income concentration. Income taxation, as well as inheritance taxation, may take account of these considerations. The information presented on

the composition of income at various income levels, the concentration of types of income, and the changes in the composition of income from periods of business prosperity to periods of business depression is obviously important in this connection. In addition, it may be noted that the data on the distribution of the Nation's total income by type of income take on added significance when it is known how the types of income are distributed with respect to the size of individual incomes.

With the purposes of our inquiry set by these questions, we may now turn to a consideration of the information on the composition of incomes. The annual issues of the Statistics of Income provide data on the aggregate amount of each type of income received by all the individuals in a given income class. On the basis of these statistics, with necessary adjustments for completeness and comparability, it is possible to determine the composition of the incomes of those individuals included within the various groups of income recipients for the years 1918-31 and 1934-36. It is important to note that when the income source data are presented in terms of the aggregate amounts for each income group, there is no direct evidence as to how the various distributive shares were combined to yield the incomes for specific individuals; that is, how many individuals in the various income classes received their incomes from one, two, or all the sources and how important were these various sources? <sup>1</sup> An examination of the tables on the composition of the incomes of those filing income-tax returns available since 1934 and 1935 indicates that for the higher incomes the total income of specific individuals is to a large extent derived from several sources.<sup>2</sup> The data as given in subsequent tables of this study show the aggregate amount of income from each source received by the individuals included within the highest 1 percent of income recipients. Some data on the proportion of the individuals in the highest 1 percent of income recipients receiving each type of income are also presented.

In the interest of emphasizing the significant facts concerning income composition with relation to income concentration, data on the composition of incomes of only the highest 1 percent of income recipients will be presented. Changes in the income shares of the various

<sup>1</sup> It may be well to indicate briefly the extent of our knowledge of the composition of the higher incomes by outlining the manner in which the basic statistics are tabulated. In addition to showing the aggregate amount of each type of income received by all individuals in a given income class, tables were presented in the Statistics of Income beginning in 1927 showing the frequency distribution of each of the principal sources of income; that is, the number of individuals receiving a specified amount of income from a given source. In 1935 and 1936, more detail was published; the size of the specific source was cross classified with the net income so that it is possible to determine, for example, how many individuals with a net income of \$40,000 to \$50,000 received an income from dividends of \$20,000 to \$25,000. Beginning in 1934, the Statistics of Income show the number of individuals in a given net income class reporting each type of income. Thus it is possible to determine the number of individuals with a net income of \$5,000 to \$10,000 who reported an income from salaries and wages or the number receiving dividends. However, these statistics do not tell us how many individuals reported an income from one or several sources, nor do we know the relative importance of these sources for individual income recipients. This type of data is available for Wisconsin. See Wisconsin Individual Income Tax Statistics, 1936, vols. IVA and IVB, also vols. I for 1929 and 1935. Special tabulations of the 1936 Federal income-tax returns, now being completed by the Treasury Department, will also provide this type of information.

<sup>2</sup> For example, the text table first published in the Statistics of Income for 1935 (pp. 13-23) which cross classified the size of net income by the size of specific sources. Statistics of Income table 7, which first contained the number of individuals by income classes reporting each source of income in 1934, is also useful in this connection.

groups of income recipients exhibited the same general pattern and the differences between the composition of all incomes and the incomes of the highest 1 percent and the smaller proportions of income recipients are largely a matter of degree. The relative importance of the income sources for the various groups of income recipients may be determined with the use of the data which will be presented for 4 years showing the composition of income by income classes.

## II. COMPOSITION OF INCOME: ALL INCOME RECIPIENTS AND THE HIGHEST 1 PERCENT

Tables 10 through 13 show the composition of income in both aggregate and percentage form for all income recipients and for the highest 1 percent. There are minor differences in the classification of income sources for all income recipients and for the highest 1 percent which are noted in the respective appendix notes. When the differences are important they are discussed in the text. In the main the classifications are similar.

TABLE 10.—*Composition of total individual income, 1918-37*<sup>1</sup>

[Millions of dollars]

Year	Compensation of employees <sup>2</sup>	Entrepreneurial net income	Income primarily from personal service	Realized capital gains and losses	Net rents and royalties	Dividends	Interest	Dividends and interest <sup>3</sup>	Income primarily from property	Total income
1918	33,445	17,266	50,711	220	2,258	3,452	2,504	5,930	8,408	59,119
1919	37,823	19,210	57,033	880	2,783	2,895	3,012	5,907	9,570	66,603
1920	44,565	14,807	59,372	870	2,950	3,215	3,377	6,592	10,412	69,784
1921	35,545	10,307	45,852	210	3,052	2,932	3,511	6,443	9,705	55,557
1922	37,753	11,519	49,272	870	3,504	3,006	3,640	6,646	11,020	60,292
1923	43,986	12,957	56,943	980	3,641	3,823	3,884	7,707	12,328	69,271
1924	43,937	13,305	57,242	1,330	3,809	3,763	4,115	7,878	13,017	70,259
1925	46,055	14,076	60,131	2,690	3,811	4,362	4,375	8,737	15,238	75,369
1926	48,796	13,661	62,457	2,210	3,589	4,736	4,541	9,277	15,076	77,533
1927	48,933	13,042	61,975	2,610	3,357	5,036	4,816	9,852	15,819	77,794
1928	50,400	13,530	63,930	4,620	3,458	5,362	5,123	10,485	18,563	82,493
1929	53,238	13,527	66,765	2,890	3,419	5,978	5,356	11,518	17,827	84,592
1930	48,693	10,404	59,097	-1,410	2,763	5,801	5,575	11,600	12,953	72,050
1931	40,991	7,436	48,427	-2,770	2,083	4,335	5,522	10,158	9,471	57,898
1934	34,628	8,841	43,469	-620	1,690	2,775	5,109	7,993	9,063	52,532
1934	34,628	8,841	43,469	10	1,690	2,775	5,109	7,993	9,693	53,162
1935	37,417	10,103	47,520	390	1,917	3,038	4,927	8,005	10,312	57,832
1936	42,911	11,678	54,589	920	2,275	4,807	4,847	9,631	12,826	67,415
1937 <sup>4</sup>	47,568	12,550	60,118	170	2,525	5,424	4,878	10,225	12,920	73,038

<sup>1</sup> Because of a change in the definition of realized capital gains and losses the table is divided into 2 parts: 1918-34 and 1934-37. In the latter period varying proportions of gains and losses are included depending on the length of time the asset was held and losses of an individual are limited to \$2,000 in excess of gains. The estimates of realized capital gains and losses are understated for each year. See appendix note A-4.

<sup>2</sup> Includes work-relief wages but excludes direct-relief payments and adjusted-service certificate payments to veterans (veterans' bonus).

<sup>3</sup> Includes also net balance of international flow of property incomes.

<sup>4</sup> The 1929-37 data are based on estimates appearing in the June 1939 issue of the Survey of Current Business. After the present report was completed, estimates including 1939 were published in the Survey of June 1940. The revisions for earlier years were of a minor character except for the preliminary 1937 dividend estimate which was revised downward in accordance with data not previously available from corporate income-tax returns. This change resulted in an absolute decline from 1936 to 1937 of three-tenths of 1 percent in the percentage share of dividends rather than the increase of the same size shown in table 11. The concentration measures are but slightly affected by the revision, there being a decline from 1936 to 1937 of 8 percent in the income share of the highest 1 percent group instead of 8.5 percent as calculated from table 1.

Source: Based, with exception of estimates of realized capital gains and losses, on income estimates of the Department of Commerce, for 1929-37, extrapolated on basis of estimates of Simon Kuznets in National Income and Capital Formation, for 1919-29, and estimates of Willford I. King in National Income and Its Purchasing Power, for 1918. See appendix note A-4 for detailed explanation of methods.

TABLE 11.—*Percentage distribution of total individual income, by type of receipt, 1918-37<sup>1</sup>*

Year	Total income	Compensation of employees <sup>2</sup>	Entrepreneurial net income	Income primarily from personal service	Realized capital gains and losses	Net rents and royalties	Dividends	Interest	Dividends and interest <sup>3</sup>	Income primarily from property
1918.....	100.0	56.6	29.2	85.8	0.4	3.8	5.8	4.2	10.0	14.2
1919.....	100.0	56.8	28.8	85.6	1.3	4.2	4.4	4.5	8.9	14.4
1920.....	100.0	63.9	21.2	85.1	1.2	4.2	4.6	4.8	9.5	14.9
1921.....	100.0	64.0	18.5	82.5	.4	5.5	5.3	6.3	11.6	17.5
1922.....	100.0	62.6	19.1	81.7	1.5	5.8	5.0	6.0	11.0	18.3
1923.....	100.0	63.5	18.7	82.2	1.4	5.3	5.5	5.6	11.1	17.8
1924.....	100.0	62.6	18.9	81.5	1.9	5.4	5.4	5.9	11.2	18.5
1925.....	100.0	61.1	18.7	79.8	3.5	5.1	5.8	5.8	11.6	20.2
1926.....	100.0	63.0	17.6	80.6	2.8	4.6	6.1	5.9	12.0	19.4
1927.....	100.0	62.9	16.8	79.7	3.3	4.3	6.5	6.2	12.7	20.3
1928.....	100.0	61.1	16.4	77.5	5.6	4.2	6.5	6.2	12.7	22.5
1929.....	100.0	62.9	16.0	78.9	3.4	4.1	7.1	6.4	13.6	21.1
1930.....	100.0	67.6	14.4	82.0	-1.9	3.8	8.1	7.8	16.1	18.0
1931.....	100.0	70.8	12.8	83.6	-4.7	3.6	7.5	9.6	17.5	16.4
1934.....	100.0	65.9	16.8	82.7	-1.1	3.2	5.3	9.8	15.2	17.3
1934.....	100.0	65.2	16.6	81.8	(4)	3.2	5.3	9.6	15.0	18.2
1935.....	100.0	64.7	17.5	82.2	.7	3.3	5.3	8.5	13.8	17.8
1936.....	100.0	63.6	17.3	80.9	1.4	3.4	7.1	7.2	14.3	19.1
1937 <sup>5</sup> .....	100.0	65.1	17.2	82.3	.2	3.5	7.4	6.7	14.0	17.7

<sup>1</sup> Because of a change in the definition of realized capital gains and losses the table is divided into 2 parts. 1918-34 and 1934-37. In the latter period varying proportions of gains and losses are included depending on the length of time the asset was held and losses of an individual are limited to \$2,000 in excess of gains. The estimates of realized capital gains and losses are understated for each year. See appendix note A-4.

<sup>2</sup> Includes work-relief wages but excludes direct-relief payments and adjusted-service certificate payments to veterans (veterans' bonus).

<sup>3</sup> Includes also net balance of international flow of property incomes.

<sup>4</sup> Less than .1

<sup>5</sup> See footnote 4 of table 10.

Source: Percentages derived from data in table 10.

As was to be expected, the relative importance of the income sources of the highest 1 percent of income recipients differs in many important respects from the composition of the income of all individuals. The year 1922 may be taken as illustrative since in that year the income share of the highest 1 percent of income recipients was 14.24 percent, only slightly below the average of 14.54 for the period 1918-34 and 1934-37. In 1922 the highest 1 percent of income recipients, received 29 percent of their income from salaries, wages, fees, and pensions, whereas 63 percent of the income of all individuals was derived from this source. The relative importance of this source for the highest 1 percent of income recipients has varied from a minimum of 20 percent in 1928 to a maximum of 40 percent in 1934. For the total income of all individuals the variations were not so large, the minimum being 57 percent in 1918 and the maximum, 71 percent in 1931. Entrepreneurial net income, that is, the net profit of independent businessmen, constituted about one-fifth of the income received by all recipients and by the highest 1 percent. There has been a sustained decline in the share of entrepreneurial net income in the incomes of all income recipients and of the highest 1 percent. From a maximum of 29 percent of total individual income in 1918 the contribution of this source fell to a minimum of 13 percent in 1931. In recent years this income category constituted about 17 percent of total income. Paralleling this movement, entrepreneurial net income dropped from a high of 27 percent of the income of the

highest 1 percent in 1919 to a low of 14 percent in 1930 and 1931 and during recent years it rose to contribute about 16 percent to the income of this group. These percentages probably understate somewhat the importance of entrepreneurial net income for the highest 1 percent owing to the underreporting of this type of income to the income-tax authorities. Except, perhaps, for realized capital gains this source is probably subject to more underreporting than the other income sources. A small part of the understatement of entrepreneurial net income is due to the exclusion from taxable income of the value of farm products raised and consumed on the farm.

Realized capital gains were largely received by those with higher incomes and hence constituted a more important income source for the highest 1 percent than for all income recipients. In 1922, of the total income of the highest 1 percent of recipients, 7.6 percent was derived from this source as compared with 1.4 percent for all income recipients. Both of these percentages understate somewhat the proportion of income derived from realized capital gains as this type of income is probably subject to more underreporting to the income-tax authorities than are the other types with the possible exception of entrepreneurial net income.<sup>3</sup> This source of income was the most volatile of all. In some years it was a negative item and in other years very large. In 1928, realized gains rose to constitute 27 percent of the income of the highest 1 percent of all income recipients.

TABLE 12.—*Composition of incomes of the highest 1 percent of income recipients, 1918-36<sup>1</sup>*

[Millions of dollars]

Year	Compensation of employees	Entrepreneurial net income	Income primarily from personal service	Realized capital gains and losses	Net rents and royalties	Dividends	Interest and miscellaneous property income	Income primarily from property	Total income
1918.....	1,963	1,683	3,646	149	355	1,996	1,097	3,597	7,243
1919.....	2,311	2,314	4,625	507	354	2,005	1,133	3,999	8,624
1920.....	2,548	1,874	4,422	391	352	2,201	1,059	4,003	8,425
1921.....	2,461	1,345	3,806	182	377	1,847	999	3,405	7,211
1922.....	2,373	1,578	3,951	621	412	2,066	1,149	4,248	8,199
1923.....	2,539	1,586	4,125	627	414	2,329	1,196	4,566	8,691
1924.....	2,647	1,780	4,427	958	445	2,495	1,228	5,126	9,553
1925.....	2,792	2,137	4,929	2,274	495	2,842	1,324	6,935	11,864
1926.....	2,946	2,072	5,018	1,826	492	3,297	1,443	7,058	12,076
1927.....	3,020	2,064	5,084	2,250	451	3,472	1,566	7,739	12,823
1928.....	3,098	2,245	5,343	4,151	426	3,671	1,669	9,917	15,260
1929.....	3,167	2,185	5,352	3,556	437	3,869	1,755	9,617	14,969
1930.....	3,141	1,414	4,555	85	374	3,468	1,522	5,449	10,004
1931.....	2,908	1,061	3,969	-615	277	2,511	1,306	3,479	7,448
1934.....	2,540	1,043	3,583	-204	180	1,609	1,088	2,673	6,256
1934.....	2,540	1,043	3,583	66	180	1,609	1,088	2,940	6,526
1935.....	2,707	1,171	3,878	331	198	1,814	1,097	3,440	7,318
1936.....	2,923			711	235				9,290

<sup>1</sup> Definition of realized capital gains and losses was changed beginning in 1934 with result that gains for 1934-36 are overstated. (See appendix note B-2, pp. 101-2). Estimate of loss of 204 millions for 1934, however, is based on same definition that prevailed during 1918-31. The other sources may be compared from year to year without appreciable error. For 1936, only sources for which data are presented are comparable to those for the preceding years. Data for 1937 were not available. See text and appendix note A-5 for definitions and year-to-year comparability of individual sources.

Source: Adjusted data from the Statistics of Income for the respective years. See appendix note A-5.

<sup>3</sup> Unlike the estimates for the other sources of total individual income, those for total realized capital gains are based on data from individual income-tax returns. See appendix note A-4, pp. 84-9.

TABLE 13.—*Percentage distribution of incomes of the highest 1 percent of income recipients, by type of receipt, 1918-36*<sup>1</sup>

Year	Total income	Compensation of employees	Entrepreneurial net income	Income primarily from personal service	Realized capital gains and losses	Net rents and royalties	Dividends	Interest and miscellaneous property income	Income primarily from property
1918.....	100.0	27.1	23.2	50.3	2.1	4.9	27.6	15.1	49.7
1919.....	100.0	26.8	26.8	53.6	5.9	4.1	23.3	13.1	46.4
1920.....	100.0	30.2	22.3	52.5	4.6	4.2	26.1	12.6	47.5
1921.....	100.0	34.1	18.7	52.8	2.5	5.2	25.6	13.9	47.2
1922.....	100.0	28.9	19.3	48.2	7.6	5.0	25.2	14.0	51.8
1923.....	100.0	29.2	18.3	47.5	7.2	4.8	26.8	13.7	52.5
1924.....	100.0	27.7	18.6	46.3	10.0	4.7	26.1	12.9	53.7
1925.....	100.0	23.5	18.0	41.5	19.2	4.2	23.9	11.2	58.5
1926.....	100.0	24.4	17.2	41.6	15.1	4.1	27.3	11.9	58.4
1927.....	100.0	23.6	16.1	39.7	17.5	3.5	27.1	12.2	60.3
1928.....	100.0	20.3	14.7	35.0	27.2	2.8	24.1	10.9	65.0
1929.....	100.0	21.2	14.6	35.8	23.8	2.9	25.8	11.7	64.2
1930.....	100.0	31.4	14.1	45.5	.9	3.7	34.7	15.2	54.5
1931.....	100.0	39.1	14.2	53.3	-8.2	3.7	33.7	17.5	46.7
1934.....	100.0	40.6	16.7	57.3	-3.3	2.9	25.7	17.4	42.7
1934.....	100.0	38.9	16.0	54.9	1.0	2.8	24.6	16.7	45.1
1935.....	100.0	37.0	16.0	53.0	4.5	2.7	24.8	15.0	47.0
1936.....	100.0	31.5	-----	-----	7.7	2.5	-----	-----	-----

<sup>1</sup> Percentages for 1918-31 and first set for 1934 may be compared from year to year without appreciable error. Definition of realized capital gains and losses was changed beginning in 1934 with result that in second set of percentages for 1934 and in sets for 1935 and 1936 the proportions of income derived from realized capital gains are overstated and the proportions derived from the other sources are slightly understated. See text and appendix note A-5 for definitions and year-to-year comparability of individual sources.

Source: Percentages calculated from data in table 12.

Net rents and royalties were about an equally important source of income for both groups amounting in 1922 to about 5 percent of total income. For the entire period under consideration, this source was a slightly larger proportion of income for all income recipients than for the higher-income group. The rise in the relative importance of rent as an income source during the early twenties and the decline after 1929 reflect the trends of the level of rents.

Similar to realized capital gains the receipt of dividends is highly concentrated among individuals with high incomes. While dividends constituted but 6 percent of the total income of individuals in 1922, this source accounted for 25 percent of the income of the highest 1 percent of income recipients. The shifts in the importance of dividends in the total income of individuals and in the income of the highest 1 percent were generally in the same direction. However, during the years of large realized capital gains, 1927 through 1929, the importance of dividends declined for the highest 1 percent of income recipients in contrast to the increase of dividends as a share in the total income of all individuals.

In 1922 interest constituted 14 percent of the total income of the highest 1 percent of income recipients and only 6 percent of the total income of all individuals. As indicated by the heading in table 13, the interest source for the highest 1 percent of income recipients includes some miscellaneous property income, such as part of the income received through fiduciaries, a small amount of dividends, and income not classified elsewhere.<sup>4</sup> The inclusion of these items offsets

<sup>4</sup> See appendix note A-5, p. 95. Dividends received through fiduciaries were classified with the dividend source.

to some degree the understatement which characterizes the interest source proper. This understatement is due to the indirect manner in which a considerable portion of interest payments are received by or accrue to individuals through life-insurance companies, savings banks, building and loan associations, and other institutions for collective saving and investment. A large part of this interest is probably unrecorded in the income-tax statistics. Another source of understatement of interest in the incomes of the highest 1 percent of income recipients is the fact that tax-exempt interest received by these individuals is probably not fully included in the statistics collected in connection with the Federal income-tax law.<sup>5</sup> The importance of interest for the total income of all individuals increased quite uniformly each year from 1920 through 1934. In contrast, interest payments as a share of the income of the highest 1 percent slowly declined in importance from 1923 until 1929. The contribution of interest to the incomes of all income recipients and of the highest 1 percent rose sharply during the depression beginning in 1929 owing to the relative stability of this as compared with the other sources of income.

### III. SHIFTS IN THE COMPOSITION OF INCOME OF THE HIGHEST 1 PERCENT OF INCOME RECIPIENTS

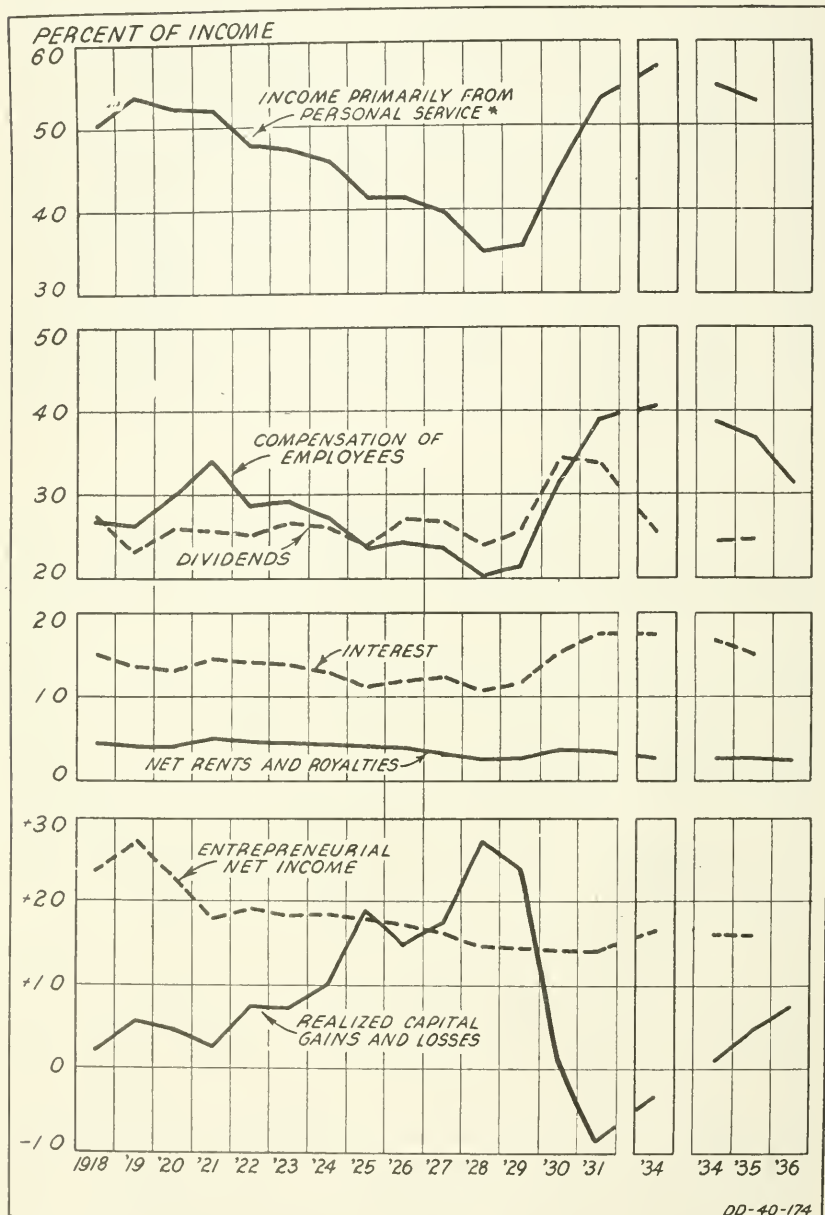
Chart III shows in graphic form the percentage composition of the income of the highest 1 percent of income receivers during the years 1918-36. The general impression conveyed by the chart is that the relative importance of the income sources from which those included each year in the highest 1 percent derived their incomes has been subject to considerable variation over the past two decades. If the various sources are broadly classified into two groups, income primarily from personal service and income primarily from property, the data indicate that generally during years of depressed business conditions, income primarily from personal service was responsible for the major portion of the incomes of the highest 1 percent. In 1934 these sources accounted for 57 percent of their incomes. Conversely, during years of business prosperity income primarily from property provided the bulk of the incomes of this group. In 1928 the percentage of income from this source rose to 65 percent. In 9 out of the 16 years covered by the statistics, income primarily from property represented a larger share of the income of the highest 1 percent than the sources classified as income from personal service. However, if the 4 years for which data are omitted, 1932, 1933, 1936, and 1937, are taken into account, income primarily from personal service undoubtedly was the largest of these two main sources in 11 years during this 20-year period. According to the more detailed classification of income sources, the compensation of employees was the largest single income component in 8 years, dividends in 6, net realized capital gains in 1, and entrepreneurial net income in 1. During the 4 years for which data are omitted or not complete, employee compensation doubtless constituted the largest income source.

Confining attention to the broad movements, it is readily seen that changes in the relative importance of the various sources were influenced to a marked degree by the fluctuations of the highly variable

<sup>5</sup> See appendix note A-5, pp. 95 and 96.

CHART III

COMPOSITION OF INCOMES OF THE HIGHEST ONE PERCENT OF INCOME RECIPIENTS, 1918-36



Source: Table 13.

NOTE.—Percentages for 1918-31 and first set for 1934 may be compared from year to year without appreciable error. The second set for 1934 and the sets for 1935 and 1936 are slightly understated with exception of percentages for realized capital gains which are overstated. See footnote to Table 13.

\* Total of employee compensation and entrepreneurial net income.

income, realized capital gains and losses. The fluctuations in the importance of this source were closely related to general business conditions, rising in years of prosperity and declining in years of depression. Reflecting the violent fluctuations in business conditions that characterized this period, the share of net profits from the sale of property varied from a negative contribution to the income of the highest 1 percent of income recipients in 1931 to a larger share than any other single source in 1928.

Year-to-year shifts in importance of the compensation of employees as a source of income for the highest 1 percent of income recipients were inversely related to changes in profits from the sale of property. In every year when the importance of such profits increased, employees' compensation declined and, conversely, when realized capital gains declined, employees' compensation rose. In 1931 and 1934 wages and salaries accounted for as much as 40 percent of the income of the highest 1 percent. In years of high business prosperity it contributed but slightly more than 20 percent to the income of this group. During recent years the share of employees' compensation in the income of the highest 1 percent has been considerably larger than in previous years of comparable income concentration. The increased importance of this source has been obtained largely at the expense of entrepreneurial net income which has experienced a marked decline.

Entrepreneurial net income, after rising in importance in 1919 to constitute the largest income source, declined sharply in 1920 and 1921. Except for small increases in 1922 and 1924 this source experienced a slow decline until 1928. A small part of this decline in entrepreneurial net income is probably due to the change in classification which excluded from this source, for the years 1922 through 1931, a portion of the realized capital gains received through partnerships from the sale of assets held over 2 years.<sup>6</sup> Entrepreneurial net income contributed about the same proportion to the incomes of the highest 1 percent from 1929 through 1931. When the slight difference in comparability of this source beginning in 1934 is taken into account, the share of the income of this higher income group represented by entrepreneurial net income was approximately the same for the years 1934 and 1935 as for the years 1929 through 1931.<sup>7</sup> Over the period from 1918 through 1935, a significant decline in the importance of entrepreneurial net income has taken place both for the highest 1 percent and all income recipients. These declines do not appear to be associated with the cyclical movements in business activity. The reduction in the share of total income represented by entrepreneurial income is apparently due to the declining importance of agriculture where the noncorporate form predominates. To some extent, the decline in the importance of entrepreneurial income for the income of the highest 1 percent may be also attributable to the tendency on the part of businessmen to shift to the corporate form of economic organization or to the supplanting of noncorporate business by concerns organized under the corporate form.<sup>8</sup> Entrepreneurial net

<sup>6</sup> See appendix note A-5, pp. 90-1.

<sup>7</sup> *Idem*.

<sup>8</sup> A thorough analysis of the reasons for these declines in entrepreneurial net income would carry us far afield. The above comments indicate some of the more probable and general causes. These and other factors deserve further investigation. Improved data on entrepreneurial net income would doubtless be of much value for this purpose.

income is a mixed income category composed of wages and salaries, rent on land, interest on invested capital, and entrepreneurial profits. The shift toward incorporating businesses, therefore, has tended to resolve this source into its constituent elements. Inasmuch as the bulk of entrepreneurial net income may be considered as a return for personal services rather than a return on capital, this source has been combined with wages and salaries in the third column of tables 10 through 13 to yield the income derived primarily from personal service. During recent years these two sources contributed a slightly larger proportion of the income of the highest 1 percent of income recipients than during earlier years characterized by a comparable degree of income concentration or business activity.

For all years, net rents and royalties constituted a minor share of the incomes of the highest 1 percent of income recipients. Generally over the period covered by the statistics, the importance of net rents and royalties declined. After rising slightly in 1921 to 5.2 percent of income as a combined result of the rapid rise in rents during this year and the decline in the other types of property income, there was a steady decline until 1929 when this source accounted for but 2.9 percent of the incomes of the highest 1 percent of income recipients. In 1930 and 1931 this source of income became slightly more important for the highest 1 percent of income recipients. However, it declined again during the years from 1934 through 1936, largely as a consequence of the greater increases in the other types of property income.

Dividends, as a share of the income of the highest 1 percent, exhibited a slight upward trend from 1919 through 1927. Except for profits from the sale of property, dividends were the only source that increased in importance during these years. Despite this general increase along with realized capital gains, the year-to-year variations in the percentages of income from dividends were inversely related to the shifts in percentages of income from realized capital gains. Dividends rose when realized capital gains declined and dividends declined when realized capital gains rose. After 1929 when profits from the sale of property declined sharply in relative importance, dividends became a more important source for the higher incomes.

The total amount of interest income received by individuals is fairly stable from year to year. Largely because of this stability, this source declined in importance for the highest 1 percent during years of business prosperity when other sources of income increased, and rose in importance during periods of depression when the amounts of other income were reduced. In prosperous years interest and miscellaneous property income accounted for slightly more than 10 percent of the income of the highest 1 percent whereas in years of business depression this source was responsible for more than 17 percent of the income of this group. As noted above these percentages represent somewhat of an understatement of the interest received directly and indirectly, by this group.

#### IV. CONCENTRATION OF TYPES OF INCOME

Table 14 indicates the extent to which the different sources of income were concentrated among the highest 1 percent of income recipients. The degree of concentration varies from a small proportion of employees' compensation to a major proportion of dividends

and realized capital gains. It should be noted that the measures of concentration in table 14 do not show the extent of concentration of each type of income among those actually receiving such income. The data show the concentration among those included within the highest 1 percent of income recipients and not all of these received each type of income. For example, in 1927 table 14 shows that 69 percent of all dividends paid to individuals were received by those individuals falling within the highest 1 percent. If we limit ourselves to those receiving dividends in 1927 and classify these dividend recipients according to the size of dividend income, a different result will be obtained. A table in the Statistics of Income for 1927 (p. 10) makes possible such a calculation. Using this table, a number of persons equal to but one-half of 1 percent of all income recipients received about 71 percent of all dividends. Similar calculations could be carried out for some of the other sources for the years 1927-1936.<sup>9</sup>

TABLE 14.—*Percentages of each type of income received by the highest 1 percent of income recipients, 1918-36*

Year	Compensation of employees	Entrepreneurial net income	Income primarily from personal service	Realized capital gains and losses <sup>1</sup>	Net rents and royalties	Dividends	Interest <sup>2</sup>	Dividends and interest	Income primarily from property
1918.....	5.9	9.7	7.2	67.7	15.7	57.8	44.3	52.2	42.8
1919.....	6.1	12.0	8.1	57.6	12.7	69.3	37.6	53.1	41.8
1920.....	5.7	12.7	7.4	44.9	11.9	68.5	31.4	49.5	38.4
1921.....	6.9	13.0	8.3	86.7	12.4	63.0	28.5	44.2	35.1
1922.....	6.3	13.7	8.0	71.4	11.8	68.7	31.6	48.4	38.5
1923.....	5.8	12.2	7.2	64.0	11.4	60.9	30.8	45.7	37.0
1924.....	6.0	13.4	7.7	72.1	11.7	66.3	29.8	47.3	39.4
1925.....	6.1	15.2	8.2	84.5	13.0	65.2	30.3	47.7	45.5
1926.....	6.0	15.2	8.0	82.6	13.7	69.6	31.8	51.1	46.8
1927.....	6.2	15.8	8.2	86.2	13.4	69.0	32.5	51.1	48.9
1928.....	6.2	16.6	8.4	89.9	12.3	68.5	32.6	50.9	53.4
1929.....	5.9	16.2	8.0	123.0	12.8	64.7	31.7	48.8	53.9
1930.....	6.5	13.6	7.7	( <sup>3</sup> )	13.5	59.8	26.2	43.0	42.1
1931.....	7.1	14.3	8.2	22.2	13.3	57.9	22.4	37.6	36.7
1934.....	7.3	11.8	8.2	32.9	10.7	58.0	20.9	33.7	29.5
1934.....	7.3	11.8	8.2	( <sup>3</sup> )	10.7	58.0	20.9	33.7	30.3
1935.....	6.8	11.6	8.2	81.7	10.3	59.7	22.1	36.4	33.4
1936.....	6.8			77.4	10.3				

<sup>1</sup> The definition of realized capital gains and losses was changed beginning in 1934. See footnotes to tables 10 and 12.

<sup>2</sup> Source for highest 1 percent includes interest and miscellaneous property income as given in table 12. Source for all income recipients includes interest and net balance of international flow of property incomes.

<sup>3</sup> In 1930 total realized capital loss was \$1,410,000,000 and the highest 1 percent of income recipients received capital gains of \$35,000,000; in 1934 the total gain was \$10,000,000 and the gain of the highest 1 percent of income recipients was \$66,000,000.

<sup>4</sup> Percentage of total loss received by highest 1 percent of income recipients.

Source: Calculated from data in tables 10 and 12.

The year-to-year differences in the degree of concentration of each type of income suggest that in seeking to explain the shifts in the degree of income concentration by means of changes in the composition of total individual income, it will be necessary to take into account not only the change in the relative importance of each type of income

<sup>9</sup> It would be possible to use these tables showing the distribution of the size of specific sources of income for an analysis of the "inequality" in the distribution of these income items by means of Lorenz or Pareto curves. Such an analysis would be limited by the fact that the data are limited to income items reported by individuals with net incomes of \$5,000 and over and filing on Treasury Form 1040, and by the manner in which realized capital gains were reported for tax purposes (See appendix note A-5, pp. 92-3.) It may be stated that sources which are highly concentrated as shown in table 14 are also unequally distributed among the individual income recipients covered in the Statistics of Income tables.

but also the changes in the degree of concentration of each source. However, the degree of concentration of certain of the sources displayed considerable stability. The extreme variability in the degree of concentration of realized capital gains from year to year is accounted for by the extreme fluctuations in the total amount of this income and by the fact that individuals with realized capital gains are usually in the higher income brackets. The sustained decline in the concentration of interest income probably reflects the methods of financing the war in 1918 and the increased holdings of bonds by institutional investors. However, interest as a share of the income of the highest 1 percent displays no tendency to decline.

In connection with the data on the composition of the incomes of the highest 1 percent and on the concentration of the types of income, it is of interest to learn what proportion of those included in this income group received an income from each source. Data enabling one to determine this have been published in the annual volumes of the Statistics of Income since 1934 (table 7). Thus in 1936, 62 percent of the individuals included in the highest 1 percent group received an income from salaries and wages. The category entrepreneurial net income is composed of the Statistics of Income classifications, business profit, partnership profit, business loss, and partnership loss. Some individuals may report an income from two of these, for example, both business and partnership profit, and, therefore, when the percentages for each of these sources are totaled, the resulting figure of 35 percent overstates to some extent the proportion of individuals in the 1 percent group receiving entrepreneurial income. Thirty-two percent of those in this group realized a capital gain and 12 percent a capital loss in 1936. Thus, 44 percent reported a profit or loss from the sale of property. Net rents and royalties was an income source for 22 percent of the individuals in this group. Sixty-nine percent reported an income from dividends in 1936. The classification "interest and miscellaneous property income" is the total of four separate items as reported in the Statistics of Income. Of these four, the necessary data as to the number reporting are available for fiduciary income and taxable interest, exclusive of the taxable interest on Government obligations. Twelve percent of the highest 1 percent reported an income from the former source and 49 percent from the latter. Doubtless many individuals reported an income from both of these sources.

## V. COMPOSITION OF INCOME BY INCOME CLASSES

The differences in the percentage composition of the incomes in the various income classes are shown in table 15. These data indicate the extent to which the composition of income varies within as small a group as the highest 1 percent of income recipients and provide the basis for determining the reasons for the differences among the selected proportions of income recipients in the magnitude and direction of the changes in income concentration that were outlined in the preceding chapter.

Owing to certain peculiarities of the basic data some care should be exercised in interpreting the data presented in this table. The classification of individuals by income classes is by their statutory net income whereas the economic income of the individuals in each class is distributed by sources. Statutory net income is the legal definition which was in effect during each year<sup>10</sup> and provided the basis for the classification of individual incomes in the annual issues of the Statistics of Income. It differs from economic income in that the legal deductions from income and wholly tax-exempt interest are not included in statutory net income. In addition, for the years 1926, 1929, and 1932 statutory net income excluded realized capital losses on assets held more than 2 years that were reported for a tax credit. This method of reporting such losses was used only by individuals with net incomes of \$30,000 and over.<sup>11</sup> In order to obtain the data shown in table 15 these losses were deducted, but the individuals were not transferred to their proper income classes after deduction of the losses. This treatment explains the apparent inconsistencies in the data for 1932 when for some classes the loss is greater than the total income. It is necessary to take account of this distortion of the data in determining the relative importance of the various sources in 1932.<sup>12</sup> In 1926 and 1929 it may be ignored as the losses reported for tax credit were quite small. For 1935 the definition statutory net income differs from the preceding years due to the changes in the law regarding the definition of realized capital gains and losses and the limitation on the deductibility of losses.<sup>13</sup> As a result of the treatment accorded gains and losses the importance of gains is slightly overstated except for the very high income classes over approximately \$200,000. For these high-income classes the fact that only various proportions of gains are included more than offsets the limitation on the deductibility of losses and, therefore, gains are slightly understated.

<sup>10</sup> Capital net gains from the sale of assets held over 2 years were taxed at a special rate in certain income classes during the years 1922 through 1933, but these gains were included in statutory net income in the data published in the Statistics of Income.

<sup>11</sup> See p. 93, footnote 31, for explanation.

<sup>12</sup> In addition, for 1932, losses from the sale or exchange of stocks and bonds held 2 years or less were limited to gains from such transactions.

<sup>13</sup> Varying proportions of gains and losses were included according to the length of time the asset was held and losses were limited to \$2,000 in excess of gains. See appendix note B-2, p. 101, for definition.

TABLE 15.—Composition of incomes, by income classes, 1926, 1929, 1932, 1935

Net income class	Total income	Compensation of employees <sup>1</sup>	Entrepreneurial net income	Income primarily from personal service	Realized capital gains and losses	Net rents and royalties	Dividends	Interest and miscellaneous property income	Income primarily from property	Percent of all income recipients in class	Number of income recipients
Percentages, 1926											
All income classes.....	100.0	62.9	17.6	80.5	2.9	4.6	6.1	5.9	19.5	100.00	46,412,000
Under \$5,000.....	100.0	71.4	17.2	88.6	.4	4.7	1.8	4.5	11.4	98.07	15,517,132
\$5,000 and over.....	100.0	28.5	19.2	47.7	12.9	4.5	23.4	11.4	52.3	1.93	894,868
\$5,000 to \$10,000.....	100.0	42.3	27.1	69.4	5.2	5.9	9.8	9.7	30.6	1.21	560,549
\$10,000 to \$25,000.....	100.0	33.2	21.4	54.6	9.1	5.1	19.3	12.0	45.4	.53	246,730
\$25,000 to \$50,000.....	100.0	24.2	16.3	40.5	12.1	4.4	29.5	13.5	59.5	.12	57,487
\$50,000 to \$100,000.....	100.0	17.8	14.2	32.0	15.0	3.4	36.2	13.5	68.0	.04	20,520
\$100,000 to \$500,000.....	100.0	11.3	10.7	22.0	24.4	2.3	39.8	11.5	78.0	.02	8,883
\$500,000 to \$1,000,000.....	100.0	4.6	6.8	11.4	34.7	1.9	41.7	10.4	88.6	.001	468
\$1,000,000 and over.....	100.0	2.9	2.2	5.1	50.1	.8	36.6	7.3	94.9	.0005	231
Percentages, 1929											
All income classes.....	100.0	63.0	16.0	79.0	3.4	4.0	7.1	6.5	21.0	100.00	48,555,000
Under \$5,000.....	100.0	73.5	15.7	89.2	-1.2	4.2	2.6	5.2	10.8	97.87	47,522,929
\$5,000 and over.....	100.0	27.0	16.8	43.8	19.4	3.4	22.2	11.2	56.2	2.13	1,032,071
\$5,000 to \$10,000.....	100.0	46.8	24.5	71.3	4.3	5.0	9.9	9.5	28.7	1.36	658,039
\$10,000 to \$25,000.....	100.0	33.7	19.5	53.2	10.0	4.4	20.0	12.5	46.8	.56	271,454
\$25,000 to \$50,000.....	100.0	23.3	13.8	37.1	15.8	3.4	29.3	14.4	62.9	.13	63,689
\$50,000 to \$100,000.....	100.0	16.0	11.3	27.3	21.9	2.6	34.0	14.2	72.7	.05	24,073
\$100,000 to \$500,000.....	100.0	9.1	11.4	20.5	36.6	1.4	31.3	10.3	79.5	.03	13,327
\$500,000 to \$1,000,000.....	100.0	3.8	10.1	13.9	49.5	.8	28.3	7.4	86.1	.002	976
\$1,000,000 and over.....	100.0	1.9	6.6	8.5	59.4	.7	24.5	6.9	91.5	.001	513
Percentages, 1932											
All income classes.....	100.0	70.6	11.5	82.1	-3.8	3.4	6.1	12.2	17.9	100.00	50,503,000
Under \$5,000.....	100.0	73.8	11.4	85.2	-2.7	3.4	3.0	11.1	14.8	99.29	50,146,558
\$5,000 and over.....	100.0	43.0	12.4	55.4	-13.1	3.4	32.2	22.2	44.6	.71	356,442
\$5,000 to \$10,000.....	100.0	55.4	13.7	69.1	-3.9	3.5	15.5	15.8	30.9	.50	251,014
\$10,000 to \$25,000.....	100.0	38.8	12.1	50.9	-4.8	3.6	25.2	22.1	49.1	.16	79,210
\$25,000 to \$50,000.....	100.0	33.8	12.8	46.6	-21.9	3.3	41.3	30.7	53.4	.04	18,480
\$50,000 to \$100,000.....	100.0	30.0	11.5	41.5	-43.7	2.9	65.2	34.1	58.5	.01	5,902
\$100,000 to \$500,000.....	100.0	19.6	7.5	27.1	-53.9	2.3	90.2	34.2	72.9	.003	1,730
\$500,000 to \$1,000,000.....	100.0	11.5	.9	12.4	-102.2	2.2	151.3	36.3	87.6	( <sup>1</sup> )	86
\$1,000,000 and over.....	100.0	1.7	-1	1.6	-32.8	.03	111.1	20.2	98.4	( <sup>1</sup> )	20
Percentages, 1935											
All income classes.....	100.0	64.7	17.5	82.2	.7	3.3	5.3	8.5	17.8	100.00	52,327,000
Under \$5,000.....	100.0	68.7	17.7	86.4	.1	3.4	2.4	7.7	13.6	99.04	51,826,885
\$5,000 and over.....	100.0	37.0	16.0	53.0	4.5	2.7	24.8	15.0	47.0	.96	500,115
\$5,000 to \$10,000.....	100.0	51.9	19.6	71.5	2.2	3.3	11.5	11.5	28.6	.65	339,842
\$10,000 to \$25,000.....	100.0	38.3	17.0	55.3	4.4	3.0	21.3	16.0	44.7	.24	123,564
\$25,000 to \$50,000.....	100.0	26.9	13.5	40.4	6.3	2.4	32.3	18.6	59.6	.05	26,029
\$50,000 to \$100,000.....	100.0	20.2	12.2	32.4	7.6	1.8	40.1	18.1	67.6	.02	8,033
\$100,000 to \$500,000.....	100.0	11.9	9.5	21.4	7.1	1.0	52.8	17.6	78.6	.005	2,497
\$500,000 to \$1,000,000.....	100.0	2.3	3.5	5.8	13.0	.4	65.5	15.4	94.2	( <sup>1</sup> )	109
\$1,000,000 and over.....	100.0	.9	.6	1.5	9.0	.1	78.0	11.5	98.5	( <sup>1</sup> )	41

<sup>1</sup> Less than 0.0005.

NOTE.—See text and appendix note A-6 for limitations of data.

Source: Adjusted data from Statistics of Income and estimates of total individual income. See text and appendix note A-6 for methods of deriving table.

The table reveals in striking fashion how the relative importance of the different income streams varies within a comparatively small group as persons with incomes of \$5,000 and over. Employee compensation, dividends, and realized capital gains provide the best illustrations of this. The very high incomes were derived largely from dividends and realized capital gains. In 1932 and 1935, however, dividends provided by far the main source of income for these groups with gains being of relatively minor importance. In 1932 there was probably a net realized capital loss even in these high brackets.

In all years dividends generally rose in importance with an increase in the size of income. In a year of high business prosperity such as 1929, however, this source declined somewhat for the incomes above \$100,000. For these very high incomes, profits from the sale of property exceeded dividends in importance. In 1926 and 1929 as the size of income increased the proportion of income derived from realized capital gains rose sharply accounting in these years for more than one-half of the incomes of those in the \$1,000,000 and over class. In all years the importance of interest and miscellaneous property income generally increased until about the \$100,000 income group and then declined for the very high incomes.

#### VI. COMPOSITION OF INCOME AND CONCENTRATION OF INCOME

Thus far data have been presented which have made possible an analysis of the composition of incomes of the higher income recipients in relation to the composition of all incomes. The changes in the composition of income of the highest 1 percent of income recipients have been examined and the degree of concentration of particular income sources has been noted. All this evidence suggests that during periods when types of income which are highly concentrated increase more or decline less than the total income of individuals, an increase in the income share of the higher income recipients would take place. The converse proposition expressed in terms of larger increases and smaller declines of sources which are not highly concentrated and less income concentration follows. In addition to changes in the relative importance of the various sources in the total income, changes in the degree of concentration of these sources also influences the degree of income concentration. Examination of the data in the foregoing tables in conjunction with the data on income concentration yields the conclusion that all these factors played a part in determining the degree of income concentration in different years. Shifts in the degree of income concentration were associated with changes in the relative importance of the various sources of income and changes in the degree of concentration of these sources. Analysis of the data on income composition also reveals to a large extent how the various changes in the distribution of income within the highest 2 percent of income recipients were brought about.

It is difficult to formulate generalizations concerning the relation of income concentration to specific income sources that will be valid for the whole period largely because of the shifting importance of the sources of income. Furthermore, to ascribe, in terms of the composition of income, the "cause" of a given change in income con-

centration to a specific income source would be to oversimplify a complex situation. A given shift in the degree of income concentration may be viewed as the joint product of a combination of changes in the volume of all income sources. In addition, changes in the volume of a single source of income cannot be considered as being independent of the rates of change of the other income sources. These statements, however, should not be interpreted as denying that for some years fluctuations in income concentration can be attributed in large part to fluctuations in a particular source.

Of all income sources, changes in the volume of realized capital gains and losses were most closely associated with changes in the degree of income concentration during this period. In all years, except 1921, an increase in income concentration was associated with increases in realized capital gains which were greater than the increases in total income or decreases which were less than decreases in total income. During the years from 1918 through 1923 not much importance can be attached to this correlation between realized capital gains and income concentration because gains constituted but a small proportion of total individual income and of the income of the highest one percent of income recipients. The changes in 1921 which provided the exception to the close relation of changes in realized capital gains and losses and income concentration will serve to confirm this observation. In this year an increase in income concentration was accompanied by a decline in realized capital gains that was relatively larger than the decline in total income. The shift in income concentration in 1921 may be explained on the basis of the combined effect of changes in the other income sources. There were declines of 20 percent and 30 percent in the aggregate amounts of employee compensation and entrepreneurial net income, respectively. In contrast to these sizable declines, there was a fall of but 9 percent in dividends and increases in rents and interest of about 4 percent. Thus the rise in income concentration during 1921 may be ascribed to the sharp declines in employee compensation and entrepreneurial net income which sources are largely received by the lower income recipients, and the relative stability of dividends which flow for the most part to the higher income recipients. The increases in volume of rents and interest also contributed to the rise in income concentration.<sup>14</sup> The effect of the relatively larger decline in realized capital gains than total income is reflected, however, in the differences among the selected proportions of income recipients in the smaller importance of the increase in income concentration. As was noted in chapter II (p. 33) the higher the incomes of the group, the smaller, relatively, was the increase in the income share received. This difference among the various proportions may be attributed largely to the decline in realized capital gains as this source generally accounts for a substantial part of the incomes in the very high brackets.

Doubtless a substantial portion of the rapid increase in concentration from 1924 through 1929 was due to the realization of capital gains on a large scale. This increase in profits from the sale of property, largely in form of securities, was related to some extent to the increase in dividends. Until 1927 the realization of capital gains may be regarded to a considerable degree as resulting from the revaluation

<sup>14</sup> For the effect of these changes on the composition of the income of the highest 1 percent see table 13.

of securities in anticipation of an increased volume of dividends. The rise in dividend income during this period was also an important factor in the increase in income concentration. The sharp decline in income concentration after 1929 is, in large part, traceable to the widespread realization of losses from the sale of property. However, realized capital losses cannot be regarded as the sole factor in this decline. After 1930 dividends declined much more than total income and hence this source was also a contributing factor in the lessening of income concentration that took place during these years.

In contrast to the violent fluctuations in the concentration of income during the years from 1925 through 1934, the degree of income concentration from 1918 through 1924 fluctuated within relatively narrow limits. The highest degree of concentration as measured by the income share of the highest 1 percent of income recipients was 14.2 percent in 1922 and the lowest was 12.4 percent in 1920. During this period, dividends as a share of total individual income did not vary greatly and the volume of realized capital gains was small. The radically different behavior of these income sources during the two periods, 1925 through 1934 as compared with the years 1918 through 1924, suggests that in the absence of fluctuations in dividends and profits and losses on the sale of property which are much larger than the fluctuations in total individual income, the concentration of income would not vary greatly from year to year. This statement assumes, of course, that no important independent factor is introduced to influence the degree of income concentration.

Table 15 reveals that the very high incomes are derived to a considerable extent from realized capital gains. The greater variability of the income shares received by the smaller groups of income recipients noted in the preceding chapter is largely due to the wide fluctuations in the volume of this income source. The increases and declines in dividend income which were generally larger than the changes in the total income of all individuals also contributed to the increased variability of these income shares.

The changes in income concentration in 1919 were of special interest as the three larger proportions of income recipients (the highest 2, 1, and one-half of 1 percent) received greater shares of the total income than in the previous year while the shares of the highest one-tenth and one-hundredth of 1 percent of income recipients were smaller. Examination of the preceding tables indicates the manner in which the changes in the various sources of income combined to bring about this result. Realized capital gains increased, but in 1919 this type of income constituted a small proportion of the total income of the highest 1 percent of income recipients (5.8 percent). While dividends declined, the proportion of total dividends received by the highest 1 percent jumped from 58 to 69 percent. The income source that apparently played the dominant role in influencing the shifts in income concentration in 1919 was entrepreneurial income. In 1919 the increase in this source apparently resulted in a larger than proportionate increase in moderately high incomes—incomes between \$5,000 and \$30,000. Table 15 indicates that this type of income is more important for this income group than for the others and table 12 shows that in 1919 the entrepreneurial net income was the largest income source for the highest 1 percent of income recipients.

As noted in the preceding chapter, the highest 2 percent of income recipients received about the same share of the total income in 1931 as in 1930 while the shares of the smaller proportions declined considerably. In terms of the changes in the composition of income, this shift in the income structure was apparently due to the large decline in property income caused by the diminished volume of dividend payments and the increase in realized capital losses. Total losses were nearly twice as large in 1931 as in 1930 and dividends declined by one-fourth. The decline in the compensation of employees was not so severe, being less than one-sixth. This change in the composition of total income, while it did not materially affect the division of total income between the highest 2 percent and the lower 98 percent of the income recipients, did decrease the share of total income received by individuals with very large incomes which are derived chiefly from dividends and realized capital gains.

Due to the interest in changes in income concentration during recent years, the role of the various income sources in producing the indicated shifts in income concentration will be briefly outlined. Comparing 1934 with 1931 there was a decline in the share of total individual income received by the highest 1 percent of income recipients from 13.7 to 12.7 percent. This decline in income concentration was accompanied by a substantial decline in dividend payments which is reflected in the reduction of the share of dividends in the total income of the highest 1 percent, 34 percent in 1931 as compared with 26 percent for 1934. The percentage declines in the sources classified as income primarily from property was about twice as large as the decline in the two sources classified as income from personal service. The increase in the degree of income concentration in 1935 was due jointly to a rise in realized capital gains and dividends, and to a sharp increase in entrepreneurial income. The fairly uniform increase in income concentration among the selected proportions of income recipients in 1935 is attributable to the relatively large increases in entrepreneurial net income and net rents and to the fact that though realized capital gains increased they were relatively small in size for an individual and constituted a small proportion of total income. The compensation of employees increased nearly as much as total income, the percentage increases being 8.1 and 8.8 percent, respectively. The increase in concentration in 1936 is clearly a result of a relatively greater increase in the income sources derived chiefly from the ownership of property than in those derived from personal service. The rise in dividends and profits from the sale of property were especially important in bringing about an increase in concentration. The decline in concentration in 1937 was accompanied by increases in the compensation of employees and entrepreneurial net income which were larger than the increases in the total income of all individuals. Losses from the sales of securities also contributed to the decline in concentration.

The analysis of the relation of the changes in concentration and the composition of income could doubtless be profitably continued. The general lines of further investigation would be to integrate a more detailed study of the changes in composition and concentration of income with an examination of the factors determining the composition

of income. Part of this more detailed study would take the form of analyzing the extent to which incomes of specific individuals are derived from several sources. As indicated in the introductory portion of this chapter, knowledge of this aspect of the composition of incomes is of considerable importance for an analysis of the composition and concentration of income. From the viewpoint of income sources, a given degree of income concentration may be said to be the result of three conditions: First, the relative importance of various income sources in the total income of individuals; second, the extent to which the receipt of each source is concentrated; and third, the extent to which individuals receive incomes from more than one source. The first two have been analyzed in this study and the third has been treated only indirectly. When more comprehensive data become available, the third factor may be investigated more thoroughly. For the present purpose the analysis has been carried far enough to disclose the intimate relationship that exists between shifts in the composition of income and shifts in the concentration of income. On the basis of the indicated relationships it is possible to determine with considerable accuracy the effect on the degree of income concentration of changes in the volume of the distributive shares and to single out the types of income chiefly responsible for shifts in the degree of income concentration. Such information raises the level of our knowledge of the process of income distribution and lays the foundation for an evaluation of the various methods for influencing the degree of income concentration embodied in Federal and State law.



## CHAPTER IV

### THE CONCENTRATION OF "PURCHASING POWER" AND THE EFFECTS OF RELIEF AND VETERANS' ADJUSTED-SERVICE PAYMENTS ON INCOME CONCENTRATION

#### I. THE CONCENTRATION OF "PURCHASING POWER": 1918-37

As indicated in the introductory part of chapter II the distribution of income may be measured at different stages in the process of income circulation. In chapter II income was measured when it was acquired in return for personal or capital services. Much interest is attached to another stage in the circulation of income—the distribution of what may be termed, in the interest of convenience, "purchasing power."

##### *1. The Transition From "Earning Power" to "Purchasing Power."*

Purchasing power may be briefly defined for the present purpose as that portion of current income which is available to individuals either for spending or saving; that is, the receipts of individuals over which they have control of disposition. This part of income may be spent for consumer goods or saved. To arrive at this concept of income it is necessary to make a number of adjustments to the distribution of acquired income. First, most of the direct personal taxes paid out of acquired income should be deducted. Second, the distribution of acquired income should be adjusted, by deductions from the incomes of the donors and additions to the incomes of the recipients, for the transfer of certain types of income among individuals and during recent years for the disbursement of direct-relief payments and the veterans' adjusted-service compensation. In addition, the distribution of purchasing power is influenced by the receipt of inheritances and insurance benefits, neither of which are included in acquired income. The distribution of purchasing power is not so uniquely defined as the distribution of earning power. The purchasing power exercised by individuals or families may be determined not only by their current income but also by their assets and ability to secure credit. The data in this study, however, are confined to the distribution of purchasing power derived from current income. In addition, some persons are interested in the purchasing power of individuals after certain expenditures which are regarded as having a prior claim on income. Therefore, other adjustments might be made, such as deduction of insurance premiums or the inclusion of consumer credit when extended and the deduction of repayments on consumer debts. The statistics showing the shifts in the concentration of purchasing power presented in this section, due to the absence of essential information, show only partially the effect of taxes and transfers of income on the concentration of acquired income.

*Personal taxes.*—There is some difficulty in determining the specific direct personal taxes which should be deducted from income. Since the purpose of this study is to segregate the income available for expenditure, the various types of indirect taxes should not be deducted from income inasmuch as these taxes are included, for the most part, in the prices of goods and services. The personal-property tax on owner-occupied homes and the motor-vehicle license fees for the personal use of automobiles are taxes which are paid directly by consumers out of their incomes, but these taxes may be considered as indirect taxes included in the expenditures for housing and for the use of an automobile. The difference between these two taxes and indirect taxes seems to be superficial and in studying the expenditures of individuals it seems proper to treat them in the same fashion as the other types of indirect taxes included in the price of goods and services. Federal and State personal-income taxes, the poll tax, and probably the major portion of the personal-property taxes on intangible and tangible property other than real estate, are paid directly from income and should be deducted in arriving at the amount available for expenditure. Of these taxes only the Federal individual income tax is deducted in this study. The other taxes cannot be deducted because of the lack of information. The total amounts of some of the taxes are not known and information on the distribution by income classes of all these taxes, except the Federal income taxes, is unavailable.<sup>1</sup>

The inability to deduct these taxes from income is not believed to be a serious limitation of the data on the concentration of purchasing power. The Federal income tax constitutes the bulk of the taxes which should be deducted, accounting in recent years for about 65 to

<sup>1</sup> The poll tax is relatively unimportant for the present purpose. The total amount collected in the fiscal year ending in 1936 is estimated at \$17,000,000. (See Tax Research Foundation, *Tax Systems of the World*, 7th ed., 1938, p. 391.) The deductions from income for State income taxes are considerably larger but complete data are not available either as to the aggregate amounts, or the distribution by income classes. The following information partly estimated and partly from State reports is available as to the amount of tax collections for the State income taxes for recent years. The figures given in the following table are estimated collections for the fiscal years ending during the given year and, therefore, apply for the most part to incomes during the previous year.

*Estimated collections from State individual income taxes in fiscal years ending in 1930-36, 1938*

[Millions of dollars]

1930	1931	1932	1933	1934	1935	1936	1938
135	83	67	64	79	100	144	249

Source: 1930-35: Collections from Selected State-Imposed Taxes, 1930-36; table 4 (U. S. Treasury Department, Division of Research and Statistics, 1936). 1936; Facing the Tax Problem, table J (p. 530) (Twentieth Century Fund, New York, 1937) 1938; Bulletin of the Treasury Department, August 1939, p. 4.

It is much more difficult to obtain an estimate of personal-property taxes on intangible and tangible property (other than real estate). For 1936 the total tax on nonbusiness personalty was estimated at \$170,000,000. (See Twentieth Century Fund, *Studies in Current Tax Problems*, New York, 1937, p. 18, footnote 14.) This figure serves merely as an approximation of the tangible and intangible property taxes which should be deducted from income for the present purpose.

75 percent of the total collections from these taxes;<sup>2</sup> and, as will be shown, the Federal income tax has varied considerably in importance relative to the incomes of the highest 1 percent of income recipients and to the total income of individuals. In contrast, the other taxes constitute a small part of the total and it is probable that the effect of these taxes on the concentration of income is relatively stable for the period covered by the statistics. There are some specific data on State personal income taxes which is informative in this connection. Assuming that the State individual income taxes are paid wholly by the highest 1 percent of income recipients the share of total income received by this group in 1935 is reduced from 13.2 (table 22) to 13.0. While there have been changes since 1918 in the number of States with personal income tax laws, two of the three States which collected in recent years more than four-fifths of the total State income taxes have had personal income tax laws for the whole period and the third introduced the income tax in 1919.<sup>3</sup> On the basis of available information it seems likely that the increase in the number of States with income taxes, as well as some increase in rates, since 1929, has made the State income tax relatively more important since that date than prior to it. Because of the comparatively small amounts collected, however, changes in the number of States with income taxes and changes in the rates of State income taxation undoubtedly have had little effect on the trends in the concentration of purchasing power. In view of the foregoing discussion it seems reasonable to conclude that the effect of direct personal taxes in producing shifts in the concentration of purchasing power will be largely taken into account by the deduction of Federal income taxes from income.

<sup>2</sup> The following table presents data on the specific taxes:

Collections from selected taxes in fiscal years ending in 1930, 1934, 1936, and 1938.

[Millions of dollars]

Type of tax	1930	1934	1936	1938
Federal individual income tax.....	1, 147	420	674	1, 286
State personal income tax.....	135	79	144	249
Nonbusiness personalty tax.....	170	170	170	170
Poll tax.....	17	17	17	17
Total.....	1, 469	686	1, 005	1, 722
Federal individual income tax as percent of above total.....	78	61	67	75

Source: Federal individual income-tax collection from Annual Report of Secretary of Treasury for 1939 (p. 375).

State personal income-tax collections from sources cited in preceding footnote.

Nonbusiness personalty taxes and poll-tax source cited in preceding footnote. Amounts kept constant owing to a lack of data. Nonbusiness personalty taxes should be somewhat higher in 1930 and 1938 and lower in 1934.

<sup>3</sup> These States are Massachusetts, New York, and Wisconsin. The New York law was first effective in 1919. From 1923 to 1929 there was no increase in the number of States having personal income taxes. After 1929, 18 States enacted income-tax laws. (See National Industrial Conference Board, *State Income Taxes*, New York, 1930, vol. I, and for list of States imposing a personal income tax on Jan. 1, 1937, *Twentieth Century Fund, Facing the Tax Problem*, New York, 1937, p. 15.) For data showing that these 3 States regularly collected from 1930 through 1935 more than four-fifths of the State personal income taxes see the U. S. Treasury Department publication *Collections from Selected State-Imposed Taxes, 1930-36*, table II. Table 4 of this publication shows the number of States with personal income-tax laws in recent years.

The definition of purchasing power adopted in this report measures the income that individuals are free to utilize as they wish either for current consumption or as an addition to their savings before this income is disbursed or saved. A further step would involve taking account of the various indirect taxes persons pay when they expend this income on goods and services. Some taxes, however, such as the corporate net income and capital stock taxes, have the effect of reducing individual incomes before they are received and, therefore, are not included in the measures of earning power or purchasing power. As pointed out in the beginning of chapter II, the determination of the incidence of all types of taxes constitutes a step in measuring the distribution of what has been termed "real income." However, the term "purchasing power" is sometimes defined to include this type of adjustment.<sup>4</sup>

It should, perhaps, be noted that the taxes which have been singled out for deduction from income in measuring purchasing power are for the most part progressive in incidence; that is, they constitute a larger proportion of individual income as the size of income increases. These direct taxes are but a small portion of all taxes that are paid directly and indirectly and obviously the incidence of these taxes would not be representative of the incidence of total tax collections by all governmental units which in 1938 amounted to \$14,811,000,000.<sup>5</sup> Collections during this fiscal year from the Federal and State personal income taxes, the poll tax and the miscellaneous personal-property taxes, exclusive of real-estate tax, probably did not exceed \$1,800,000,000. Indirect taxes, such as sales, excise, and other taxes shifted for the most part to the consumer, in contrast to the income tax, are largely regressive in incidence.<sup>6</sup> Collections from these taxes are at least several times as large as the revenue from the three types of taxes which should be deducted from income for the purpose of measuring purchasing power, as defined in this report.

*Income transfers.*—In addition to the deduction of direct personal taxes, the distribution of purchasing power is influenced by gifts among individuals, contributions to charitable organizations, inheritances, insurance benefits, and in recent years the receipt of direct

<sup>4</sup> In order to show the effect of this adjustment in a single year, it would be necessary to determine, by income classes, the incidence of all taxes. When it is desired to show the shifts in the concentration of purchasing power, according to this alternative definition, over a period of years, it would possibly be simpler and more satisfactory to take account, for the most part, of the changing incidence of all taxes by securing data—first, on the changes in the prices of the goods and services purchased by various income classes; second, on the changes in the allocation of income between various types of goods and services; and, third, on the changes in the ratio of consumption to saving. In this manner the effect of indirect taxes would be largely reflected in the price data. Unfortunately the magnitude of this task precluded the possibility of undertaking it in the present study. An easier though probably less satisfactory method would be to investigate the changes in percentages of total tax collections from the various types of taxes and taking account of their incidence. See chapter 3 of *Facing the Tax Problem* (Twentieth Century Fund, New York 1937) for a description of the changes since 1913 in the relative importance of the various taxes.

<sup>5</sup> *Bulletin of the Treasury Department*, August, 1939, p. 4.

<sup>6</sup> For an analysis of the incidence of the total tax "burden" on different income classes by the use of hypothetical examples see *Twentieth Century Fund, Facing the Tax Problem*, New York, 1937, ch. 16, and for a more detailed analysis of the same data see Newcomer, Mabel; "Estimate of the Tax Burden on Different Income Classes" in *Studies in Current Tax Problems: The Twentieth Century Fund, 1937*. It appears on the basis of the examples in this study that for the income classes not subject to income and death taxes the taxation system in effect during 1936, is regressive. For the income classes subject to income and death taxes, Miss Newcomer concludes that the tax system is progressive in incidence. Because of the changes from year to year in the relative importance of progressive and regressive taxes, the incidence of the tax burden in 1936 cannot be taken as representative of all years. For example in 1930 the Federal Government derived 68 percent of its revenue from taxes which are largely progressive in incidence (income taxes, corporate and individual, estate and gift taxes). In 1934 only 34 percent of the revenue was obtained from these sources. In 1937, however, 49 percent of Federal revenue was obtained from these sources. (The 1934 and 1937 percentages include also capital-stock and excess-profits taxes which were not in effect in 1930. Data from Annual Reports of the Secretary of the Treasury.)

relief and the veterans adjusted-service compensation.<sup>7</sup> Little is known concerning the magnitude and distribution by income classes of most of these items.<sup>8</sup> In this study it was practicable to take into account only the last two—direct relief and the veterans' adjusted-service compensation. It may be indicated that the effect on the distribution of purchasing power of the gifts, inheritances, insurance benefits, and contributions is likely to be fairly stable over short periods so that the failure to take them into account may not appreciably affect the trends in the concentration of purchasing power which are shown in this section.<sup>9</sup> The shares of purchasing power at the disposal of the highest 1 percent of income recipients would probably be only slightly overstated.<sup>10</sup> The absence of information on the receipt of inheritances, gifts, insurance benefits by income classes makes it impossible to arrive at a more positive conclusion. Probably only the portions of these types of receipts that are used for current expenditures should be taken into account for the present purpose.

## 2. Statistics of "Purchasing Power" Concentration.

In view of the limited availability of the necessary basic information, the data on the concentration of purchasing power presented in this section take into account only the effect on the concentration of earning power of Federal income taxes, relief payments, and the veterans' adjusted-service compensation. As indicated by the foregoing discussion it is believed that the trends in the concentration of purchasing power will be revealed when these adjustments are made. Due to the inability to carry through all of the indicated corrections, the level of the purchasing power shares shown in table 16 is probably

<sup>7</sup> For a discussion of the characteristics of relief and veterans' adjusted-service payments as a form of income see below, pp. 65-7.

<sup>8</sup> In a recent publication of the National Resources Committee entitled *Consumer Expenditures in the United States* it was estimated that gifts and contributions by families and single individuals to individuals and organizations amounted to \$2,178,000,000 or 3.7 percent of total consumer income (p. 46). These figures relate to a 12-month period during 1935-36. The amount for gifts to individuals includes gifts such as Christmas and birthday presents. It is doubtful whether these should be included as transfer income items when the distribution of purchasing power is under consideration. As was mentioned at an earlier point the gifts included for the present purpose would need to be limited both as to type and relationship of donor and recipient. The break-down of gifts between gifts to individuals and gifts or contributions to organizations is available in this publication only for families. Of total gifts of \$1,324,000,000 made by families (exclusive of single individuals) \$723,000,000, or 55 percent, were given to individuals. Data on the contributions to charitable organizations reported by individuals filing income tax returns are available in the annual issues of the *Statistics of Income* since 1922; but data on total contributions made to these organizations are difficult to obtain. Estimates are presented for the years 1909, 1914, and for alternate years from 1919 to 1931 in W. H. Lough's *High Level Consumption* (p. 245). For 1929 an estimate of \$1,712,000,000 is given. An estimate for 1935-36 of \$980,000,000 may be derived from the National Resources Committee study by assuming that the distribution of gifts between those to individuals and to organizations is the same for single individuals as for families.

Using the *Statistics of Income* (table 7) to obtain data on the contributions of the highest 1 percent of income recipients, the share of total contributions to charitable organizations made by them was 18 percent for 1929 and 17 percent for 1935-36. These percentages may be compared with the share of total income received by the highest 1 percent of income recipients—18.5 percent in 1929 (table 1) and 13.2 percent in 1935 and 14 percent in 1936 (table 22). Not much significance can be attached to these percentages, however, because of the slender basis for the estimates of total contributions and the probable underreporting of contributions to the Bureau of Internal Revenue. In addition, the contributions deductible under the income-tax law may not exceed 15 percent of net income before deduction of the contributions.

<sup>9</sup> It may be noted that contributions as a percentage of the income of the highest 1 percent of income recipients display considerable stability, rising somewhat, however, in years of business depression and declining in years of business prosperity. For the period 1922-31 and 1934 these percentages varied from 2.1 percent in 1925, 28 and 29 to 2.6 percent in 1931. During the years 1934-37 when, due to the change in the definition of income, the percentages would slightly understate the proportion, the highest figure was 2.3 percent in 1937 and the lowest, 2.0 percent in 1935 and 1936.

<sup>10</sup> On the basis of the data on the distribution of expenditures for gifts and contributions by size of family incomes (*Consumer Expenditures*, table 27A, p. 87) and the use of extreme assumptions, it seems likely that the effect of the deductions for contributions and the transfers involved in gifts (accepting the broad definition of gift) would reduce the share of total income received by the highest 1 percent of income recipients by less than 1 percent (absolute amount). For example, in 1936 the share of acquired income received by the highest 1 percent of income recipients was 14.5 percent and it seems probable that this group's share of income after taking into account the change in the distribution of income resulting from gifts and contributions would be not less than 13.5 percent. The changes in the income shares of the smaller proportions of income recipients due to these two items are probably of greater importance.

high by an absolute amount of about 1 percent. It should be noted, however, that all the data on the concentration of purchasing power as well as on the concentration of earning power understate the actual degree of concentration because of the understatement which characterizes the basic data on the high incomes.<sup>11</sup>

TABLE 16.—*Shares of total "purchasing power" available to the highest 1 percent of income recipients, 1918-37*<sup>1</sup>

Year	Percent of total purchasing power available	Index (1918=100)	Year	Percent of total purchasing power available	Index (1918=100)
1918	11.30	100.00	1929	17.45	154.42
1919	11.87	105.04	1930	14.03	124.16
1920	11.32	100.18	1931	13.97	115.66
1921	12.59	111.42			
1922	13.14	116.28	1934	11.64	103.01
1923	12.23	108.23			
1924	13.35	118.14	1934	12.02	106.37
1925	15.56	137.70	1935	12.21	108.05
1926	15.42	136.46	1936	12.58	111.33
1927	16.28	144.07	1937	11.80	104.42
1928	18.10	160.18			

<sup>1</sup> See text for limitations of data. The second percentage for 1934 and those for 1935 through 1937 are overstated for reasons indicated on p. 15 of ch. II and in appendix note B-2

Source: See appendix note A-7.

Table 16 shows the shares of the total purchasing power available to the highest 1 percent of income recipients when, first, the Federal income taxes are deducted from the incomes of all income recipients and the highest 1 percent, and, second, work- and direct-relief payments and the veterans' adjusted-service compensation are included in the total income of individuals. The influence of year-to-year changes in prices is largely eliminated by comparing the concentration of purchasing power in one year with the concentration in another year. However, insofar as there were differences in the movements of the prices of goods and services purchased by various income groups, these differences would have to be taken into consideration in interpreting the data.<sup>12</sup>

*Effect of adjustments for "purchasing power" on the concentration of "earning power."*—Table 17 shows the percentage reductions in the income shares of the highest 1 percent of income recipients resulting from these adjustments. These percentage reductions vary from a minimum of 4.1 percent in 1930 to a maximum of 13.4 percent in 1936. In 1930 the highest 1 percent of income recipients received 14.63 percent of the total income received for personal and capital services (table 1, p. 16) and, as indicated in table 16, the share of this group after deduction for income taxes was 14.03. In 1936 when the reduction in the share of the highest 1 percent of income recipients was greatest, the share of total purchasing power was 12.58 percent and the share of total acquired income was 14.53 percent. Part of the difference between the two shares in 1936 is due to the inclusion of direct relief and the soldiers'

<sup>11</sup> This is a result of nonreporting and underreporting of incomes to the Bureau of Internal Revenue. See ch. II, pp. 15.

<sup>12</sup> Some statistics, based on scanty data, showing price movements for different income groups were published by Willford I. King in *The National Income and Its Purchasing Power*, New York 1930, pp. 68-69. The available data on this subject are extremely inadequate.

bonus in the total estimate of purchasing power and not entirely to the deduction of income taxes. If these two items are excluded and the effect of the deduction for income taxes is alone considered, the reduction in the income share of the highest 1 percent of income recipients is somewhat less. Thus, the deduction of Federal income taxes reduced the share of the highest 1 percent from 14.53 to 13.00 percent. This is a reduction of 10.5 percent in the income share of this group which may be compared with the reduction of 13.4 percent when the combined effect of income taxes and direct relief and the veterans' bonus is measured. In other years direct relief and the veterans' bonus exercised much less influence as these two items constituted a smaller proportion of total income.<sup>13</sup> The reductions in the share of income shown by the data in table 17 are, therefore, almost wholly attributable to the deduction of income taxes. Considering the effect of income taxes alone, the reduction in the income share of the highest 1 percent of income recipients in 1936 was also slightly larger than in any other year with the exception of 1918 and 1919.

TABLE 17.—*Effect of adjustments for "purchasing power" on the income shares of the highest 1 percent of income recipients, 1918-37*

Year	Percentage reductions in income shares	Year	Percentage reductions in income shares	Year	Percentage reductions in income shares
1918.....	11.7	1925.....	5.1	1934.....	8.1
1919.....	11.1	1926.....	4.8		
1920.....	8.9	1927.....	5.2	1934.....	7.8
1921.....	7.2	1928.....	6.0	1935.....	8.9
1922.....	7.7	1929.....	5.5	1936.....	13.4
1923.....	5.6	1930.....	4.1	1937.....	11.2
1924.....	5.8	1931.....	4.7		

NOTE.—The data show the percentage by which the share of total income is reduced when Federal income taxes are deducted and direct relief and the veterans' adjusted-service compensation are included in the total income.

Source: Calculated from data in tables 1 and 16.

Because of the progressive rates of income taxation, the deduction of income taxes results in a relatively larger reduction in the income as the size of income increases.<sup>14</sup> The reductions in the income shares of the proportions of income recipients less than 1 percent are, therefore, more substantial than those shown for the highest 1 percent of income recipients. Examples for the years 1926 and 1936 will be presented as illustrative of the reductions which take place when the income shares of higher income groups are adjusted to obtain measures of purchasing power. The rates of taxation were low in 1926 and high in 1936.<sup>15</sup> Table 18 contains for 1926 and 1936 the shares of purchasing power received by selected proportions of income recipients and the percentage reductions in these shares due to the adjustments for purchasing power. The effect of progressive rates of taxation in each year and of higher rates of taxation in the latter year are clearly shown by this table. In 1926 the income share of the highest 1

<sup>13</sup> See table 20, p. 67.

<sup>14</sup> This is true, of course, only if the surtax rates continue to increase with the size of income. The surtax rates have generally remained constant after a given income is reached. To take the extreme instances, during the years 1925 through 1931, the surtax rates were constant above \$100,000. In the years 1936 through 1938 the surtax rates rose for incomes up to \$5,000,000.

<sup>15</sup> See table 19, p. 63, for data showing the proportions of the incomes of the highest 1 percent paid in income taxes during the years 1918-37.

percent of income recipients was reduced by 4.8 percent and the share of the highest one one-hundredth of 1 percent by 13.3 percent. In 1936, when the rates of income taxation were considerably higher, the reductions for these two groups were 13.4 percent and 40.6 percent. As indicative of the differences between these 2 years in the effect of the adjustments for purchasing power it may be noted that percentage reduction in the share of the highest one one-hundredth of 1 percent of income recipients in 1926 was the same as the reduction in the share of the highest 1 percent of income recipients in 1936. The proportions of income paid in income taxes were also about the same for these two groups—14.1 for the highest one one-hundredth of 1 percent of income recipients in 1926 and 13.4 percent for the highest 1 percent of income recipients in 1936. Due to differences in the income-tax-rate structures of the 2 years, the percentage reductions in the income shares resulting from the indicated adjustments increased more with the size of income in 1936 than in 1926. Thus, in 1926 there was a reduction of 10.0 percent in the income share of the highest one-tenth of 1 percent of income recipients and of 13.3 percent in the income share of the highest one one-hundredth of 1 percent. In 1936 there was a decline of 24.9

TABLE 18.—*Shares of "purchasing power" available to selected proportions of income recipients and effect of adjustments for purchasing power, 1926 and 1936*<sup>1</sup>

Year	Group of income recipients		
	Highest ½ of 1 percent	Highest ⅓ of 1 percent	Highest ⅒ of 1 percent
<i>1926</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Share of purchasing power.....	11.79	6.13	2.34
Proportion of income paid in Federal income taxes.....	7.29	10.97	14.09
Percentage reduction in income share.....	6.43	10.00	13.33
<i>1936</i>			
Share of purchasing power.....	9.35	4.31	1.17
Proportion of income paid in Federal income taxes.....	15.13	23.81	39.90
Percentage reduction in income share.....	16.29	24.91	40.61

<sup>1</sup> Shares for 1936 are slightly overstated. Proportion of income paid in income taxes is slightly understated for 1936. See appendix note B-2.

Source: See appendix note A-7.

percent in the income share received by the former group and a decline of 40.6 percent in the share received by the latter group.

The effect of income taxes in reducing the incomes of the highest 1 percent of income recipients is also shown by table 19. The percentages of economic income paid to the Federal Government in the form of income taxes given in this table are not directly comparable to Statistics of Income data on effective tax rates, as the latter are based on statutory net incomes while the percentages in table 19 are based on economic incomes.<sup>16</sup> The changes in the percentage of income paid for income taxes reflect changes in the rates of taxation; changes in the treatment for taxation of certain income, such as dividends, realized capital gains and losses, and "earned" income; changes in personal exemptions and credits allowed for dependents; and the changing levels of income with constant rates for specific amounts of income. This

<sup>16</sup> See ch. II, pp. 10-11, for definitions of economic income and statutory net income..

last factor explains the sharp decline in the percentages from 1928 through 1931 when rates were constant<sup>17</sup> and treatment of certain types of income was unchanged.

TABLE 19.—*Proportions of economic income of highest 1 percent of income recipients paid in Federal income taxes, 1918-37*<sup>1</sup>

Year	Percent	Year	Percent	Year	Percent
1918.....	13.41	1925.....	5.98	1934.....	7.69
1919.....	12.81	1926.....	5.85		
1920.....	10.30	1927.....	6.28	1934.....	7.38
1921.....	8.51	1928.....	7.43	1935.....	8.43
1922.....	9.10	1929.....	6.62	1936.....	12.23
1923.....	6.51	1930.....	4.60	1937.....	11.39
1924.....	6.74	1931.....	3.18		

<sup>1</sup> The second 1934 percentage and those for 1935 through to 1937 understate slightly the proportion of income paid for Federal-income taxes. See text and appendix note B-2.

Source: Appendix tables A-1 and A-7.

Income-tax payments as a proportion of the income of the highest 1 percent of income recipients were highest in 1918, 1919, and 1936. The 1936 percentage is slightly understated when compared to the percentages for the years prior to 1934 so that the income-tax payments in 1936 were about as large a proportion of the income of this group as in 1919.<sup>18</sup> While the surtax rates were higher in 1936, the "normal" tax rates were higher in 1918 and 1919. This difference in rate structures yielded higher total tax rates, surtax and normal tax, for incomes of less than \$25,000 in 1918 and 1919 than in 1936.

*Year-to-year changes in the concentration of "purchasing power."*—The general movements in the concentration of purchasing power are similar to those already described in chapter II for the concentration of earning power. Apart from minor variations, the degree of concentration rose after 1921 and reached a maximum in 1928. After 1928 the concentration of purchasing power declined sharply and then increased somewhat from 1934 through 1936. In 1937 the share of total purchasing power at the disposal of the highest 1 percent of income recipients declined slightly.<sup>19</sup>

Examination of table 17 is probably the simplest method for isolating the differences between the magnitudes of the year-to-year variations in the concentration of purchasing power and acquired income or earning power. After 1919 the differences between the shares of purchasing power and earning power declined. The decline continued, interrupted only by a few minor increases, until 1934. After 1934 the difference became greater.

<sup>17</sup> Rates were constant for this period except for a modification in 1929. In 1929 the rates of the normal tax on individuals were reduced from 1½, 3, and 5 percent to ½, 2, and 4 percent by joint resolution of Congress. The first percentage is the normal rate on the first \$4,000 of net income, the second on the second \$4,000, and the third on the balance over \$8,000. (See Statistics of Income for 1929, p. 1.)

<sup>18</sup> The understatement arises from the change in definition of income beginning in 1934. Relative to the earlier years income of the highest 1 percent is overstated during 1934 through 1937. For the years 1934 through 1937 taxes paid would, therefore, be a somewhat larger percentage of income than shown in table 19 if there were no change in the definition. See ch. II, p. 15 where the definition of income for these years is explained and appendix note B-2.

<sup>19</sup> To some extent income taxes may be considered in part as a deduction from the income of the following year rather than of the year the income on which the tax is paid was received. This is so because the tax is not paid during the year the income was received but in the subsequent year. Only those with high incomes set up special reserves for income taxes, but most taxpayers probably make some provisions for taxes out of their current income. In years when the rates of income taxation were increased or income declined sharply, income taxes probably reduce to some extent the income of the following year. The opposite effect results when rates decline and incomes increase. This aspect of the statistics on purchasing power concentration should be taken into account when using them for certain purposes.

Thus, the most striking differences between the trend in the concentration of earning power and purchasing power are clearly revealed. The first is the greater increase in the degree of concentration of purchasing power that occurred during the twenties. As shown in table 1 of the second chapter (p. 16) the share of the acquired income or earning power received by the highest 1 percent of income recipients increased from 1918 to 1928 by 51 percent. The comparable increase in the share of total income available for expenditure and saving by this proportion of the Nation's income receivers was 60 percent. This sharper rise in the concentration of purchasing power is, of course, due to the decline, particularly after 1924, in the rates of Federal income taxation.<sup>20</sup> In 1918 Federal income taxes absorbed 13.48 percent of the income of the highest 1 percent of income recipients and in 1928 only 7.43 percent. The percentage declines after 1928 in the shares of purchasing power and earning power received by the highest 1 percent of income recipients were approximately the same.

The changes in the shares of purchasing power received by the groups of income recipients of less than 1 percent were also in the same direction as the changes in the shares of earning power received by these groups. As a result of the lower surtax rates in effect from 1924 through 1928, the differences between the increases in the shares of earning power and purchasing power were greater for these smaller proportions of income recipients than for the highest 1 percent. As shown in chapter II, the increases in the shares of earning power received by the smaller proportions of income recipients were greater than those received by the larger proportions. Therefore, the increases in the shares of purchasing power received by the groups with less than 1 percent of the income recipients were considerably larger than the increases in the shares received by the 1 and 2 percent groups.

In contrast to this greater increase in the concentration of purchasing power, the rise in the concentration of purchasing power after 1934 was not so great as the increase in the concentration of earning power. This is particularly true of 1936 when the surtax rates on incomes above \$50,000 were raised. In 1936 the share of acquired income received by the highest 1 percent of income recipients rose by 8.4 percent (table 1, p. 16) while the increase in the share of purchasing power available to this proportion of the Nation's income receivers was only 3.0 percent. A further contrast between the changes in concentration in these two periods is provided by the changes in the shares of purchasing power received by the smaller proportions of income during the years 1934 through 1936. During 1936 there was an increase of 10 percent in the share of earning power received by the highest one-tenth of 1 percent of income recipients (table 3, p. 23). On the other hand, the share of purchasing power of this group was about the same.<sup>21</sup> There was, in fact, a slight decline in the share of purchasing power received by the highest one one-hundredth of 1 percent of income recipients in contrast to an increase of over 9 percent in the share of earning power received by this

<sup>20</sup> Part of the decline in the rates of taxation is attributable to the more favorable treatment accorded realized capital gains or assets held over 2 years.

<sup>21</sup> 4.25 percent in 1934, 4.30 percent in 1935, 4.31 percent in 1936, and 4.00 percent in 1937. Federal income taxes paid by this group were \$383,000,000 in 1934, \$490,000,000 in 1935, \$874,000,000 in 1936, and \$799,000,000 in 1937. See appendix note A-7 for method of securing these data. For the purpose of comparing changes in shares of earning and purchasing power, the fact that actual changes for these years differ somewhat from those shown by the data is not particularly important as both sets of data are biased to same degree. In 1936 the rise in concentration is slightly greater than shown. See appendix note B-2.

group.<sup>22</sup> The share of purchasing power available to this group in 1936 was less than in 1934 while the share of earning power was more than 13 percent larger. This divergence between the movements in the concentration of earning power and purchasing power is largely a consequence of the increase in surtax rates in 1936. The general rise in incomes also played a part, as this factor can account for an increase in the tax rate for these groups of income recipients with no change in the rate structure.

## II. RELIEF AND THE VETERANS' ADJUSTED SERVICE PAYMENTS

In recent years the receipt of direct and work relief and the veterans' adjusted service compensation has introduced new elements into the income structure of the Nation. These sources of income possess characteristics which make it desirable to prepare additional measures of income concentration. Statistics of the concentration of income will be presented in this section which include and exclude these three types of income. Individual income is taken as received; that is, prior to the adjustments for purchasing power. Before the statistics are given, the characteristics of these types of income will be analyzed briefly in the light of the discussion in chapter II on the objectives of measuring the concentration of income. While exception may be taken by some to parts of the following analysis, it is believed that the measures of concentration according to the several income totals are of interest in that they enable the individual to select the total best suited to his particular purpose.

In chapter II, work-relief wages were included as income when the concentration of earning power or acquired income was under consideration. In doing so, it was recognized that this type of wage income, though similar in some respects to the same type of income derived from private and public employment at "regular" governmental functions, possesses certain distinguishing features. The most important for the present purpose is that the wage payment to an individual, while subject to variation according to the class of work and to the region, was largely determined by criteria related to need. For most of the period, the rates of pay for the various classes of work were equal to the rates prevailing in private industry, but the total wage payment to an individual was limited through control of hours of work. The personnel on work relief projects were largely drawn from families certified as being in need of relief and the type of project was to a considerable extent determined by the certified personnel. It seems proper to conclude, therefore, that while work-relief wages were paid for personal services, neither the size of the payment nor the services were determined by forces within the exchange economy which, for the most part, directly determined them in private employment and to a considerable extent, though indirectly, in regular public employment.<sup>23</sup>

<sup>22</sup> Shares of purchasing power available to the highest  $\frac{1}{100}$  of 1 percent of income recipients were 1.27 percent in 1934, 1.26 percent in 1935, 1.17 percent in 1936, and 1.10 percent in 1937. Federal income taxes paid by this group in 1934 were \$235,000,000 in 1935, \$295,000,000 in 1936, \$502,000,000; and in 1937, \$464,000,000. See appendix note A-7 for method of securing these data. For data on concentration of earning power see table 3, p. 23.

<sup>23</sup> The problem which work-relief earnings present for this study should be distinguished from the problem these earnings present for estimates of the national income. For estimates of the national income the answer to the question as to what portion of work-relief earnings should be included in the national income is to be found in an evaluation of the goods and services produced by work-relief projects. The problem work-relief earnings raises for this study is whether in measuring the concentration of earning power it is proper to include these earnings in the total income of all individuals. As indicated above, a different set of considerations is relevant for the latter problem.

Largely because of the fact that this wage income was paid in return for personal services and because of its importance both directly as a source of income and indirectly through its influence on the income structure, it was believed that the measures of the distribution of earning power would possess greater significance if work-relief earnings were included in the total income of all individuals. In view of the distinctive character of this income, measures of income concentration will be presented in this chapter excluding work-relief wages. However, the data indicate that the inclusion or exclusion of work-relief wages results in but a small difference in the degree of income concentration and in the magnitude of the year-to-year changes. Because of the direct and indirect effects of work-relief wages on the whole income structure, care must be exercised in interpreting the measures of income concentration, excluding work-relief wages. In particular, it cannot be assumed that the concentration shown by the data would have prevailed had there been no made-work program. When work-relief wages are included in total income and direct relief excluded, as in chapter II, the shifts in the program of the Federal Government with respect to the relative importance of work relief and direct relief as a means of dealing with the unemployment problem will influence the resulting trends in concentration of earning power as shown by the figures.

It seems evident that direct relief should be treated as a transfer item and excluded from income when studying the distribution of earning power. While the other transfer items involve for the most part <sup>24</sup> deductions from the incomes of some individuals and additions to the income of others, the method adopted in the financing of direct relief by borrowing involves the creation of a transfer income item without a commensurate deduction from the incomes of either individuals or business enterprises.<sup>25</sup> If the funds for direct relief were obtained by taxation it would be necessary to deduct the amounts from the incomes of the taxpayers. For some types of income analysis the distinction between transfer incomes financed by taxation and by borrowing may be unimportant. However, for the present purpose this distinction is crucial. Although the money expended for direct relief was obtained from the savings of the purchasers of the bonds, for the present purposes this type of transfer cannot be considered as a deduction from their incomes. The incomes received in the given year by the investors were not diminished by the fact that they chose to buy a Government bond. On the other hand, these funds provided a source of income for the recipients of relief. In the case of a gift from one individual to another the donor's income may be said to be reduced by the amount of the gift, as he has no claim to the money spent for the gift. However, when a transfer income is created by the Government borrowing and disbursing funds, the individuals providing the funds receive a claim for the return of the funds in the

<sup>24</sup> The other exceptions are gifts paid from the accumulated savings of the donor or free public services made available to individuals which are financed by the taxation of business enterprises. Direct relief payments of a given year may be considered as the disbursement of the past and current savings of those who purchased the Government bonds.

<sup>25</sup> The assumption that direct relief payments were financed by borrowing requires, perhaps, some explanation. In general, there is no earmarking of Federal Government receipts for particular purposes. Inasmuch as relief expenditures were classified as emergency expenditures and at the same time as direct relief was disbursed, additional funds were obtained by borrowing, it may be presumed that the direct relief payments of the Federal Government were financed by borrowing. In the case of State and local governments, relief disbursements were financed to a considerable extent by general tax revenues with emphasis on sales taxes. Therefore, to the extent that funds raised in this manner are included in direct relief disbursements there is a duplication of incomes.

form of a bond which is, of course, similar in this respect to other bonds. In this restricted sense total individual income may be said to be increased by the disbursement of direct relief. The method of financing relief by borrowing may result in a different distribution of income in future years than would otherwise prevail, but this aspect is not relevant for the present purpose. In addition, the expenditure of direct relief funds has an indirect effect on the general level and volume of income.

The veteran's adjusted-service compensation also is excluded from acquired income but on different grounds than direct relief. These payments may be considered as part of the compensation for services rendered at the time of the war. As such they represent a payment which was separated by many years from the performance of the service. While other items included in acquired income, such as pensions, also possess to some degree this characteristic, the unusually large amounts involved and the nonrecurrent and noneconomic nature of this disbursement point to the desirability of excluding this income in studying the concentration of earning power. Measures of income concentration will be presented in this section, excluding work relief, direct relief, and the veterans' bonus, and including these income items. Table 20 shows the amounts of these three types of income and the percentages they constituted of total income.

TABLE 20.—*Direct and work relief and veterans' adjusted-service compensation payments, 1929-37*<sup>1</sup>

Type of income	1929	1930	1931		1934 <sup>4</sup>	1935	1936	1937
In-millions of dollars								
Direct relief.....	48	84	204		696	948	660	876
Work relief.....					1,430	1,339	2,383	1,739
Adjusted-service compensation <sup>2</sup> .....			912		24	24	1,428	132
Total.....	48	84	1,116		2,150	2,311	4,471	2,747
As percentages of total income								
Direct relief.....	0.1	0.1	0.4		1.4	1.7	1.0	1.2
Work relief.....					2.8	2.4	3.7	2.4
Adjusted-service compensation <sup>2</sup> .....			1.6		(3)	(3)	2.2	.2
Total.....	.1	.1	2.0		4.2	4.1	6.9	3.8

<sup>1</sup> In 1932, direct relief payments were \$444,000,000 and the veterans' adjusted service payments \$144,000,000. In 1933 direct-relief payments were \$552,000,000, work-relief wage \$640,000,000, and veterans' adjusted-service payments \$60,000,000.

<sup>2</sup> Veterans' adjusted service compensation is included in the year during which loans were made on the certificates and the final payments on the balance were made.

<sup>3</sup> Less than 0.1 percent.

<sup>4</sup> The various types of income constitute the same percentages of the 1934 total income which is comparable to the total income figures for the preceding years.

Source: Data on various types of relief and bonus payments from the National Income Division, Department of Commerce. Total individual income is taken from table 10, less work-relief earnings.

### 1. Statistics of Income Concentration, Excluding Work-Relief Wages, 1934-37.

Table 21 contains for the years 1934 through 1937 the shares of total individual income received by the selected proportions of income recipients as these were defined in chapter II with the exception that work-relief wages are excluded from total income. As the exclusion

of work-relief wages affects only the total income of all individuals and not the incomes of the selected proportions of income recipients, the differences among the various proportions in the magnitude of the year-to-year changes in income shares are the same as shown in table 3 and discussed in connection with that table. The income shares for each group are, of course, somewhat larger than when work relief is included in total income. The greatest difference is in 1936 when work-relief payments constituted a larger proportion of total individual income than in any of the other years from 1934 through 1937. In 1936 the highest 1 percent of income recipients received 14.53 percent of the total individual income when work-relief earnings are included (table 3) and 15.09 percent when this income is excluded (table 21).

TABLE 21.—*Shares of total individual income, excluding relief and veterans' adjusted-service payments, received by selected proportions of income recipients, 1934-37*<sup>1</sup>

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest 1/10 of 1 percent	Highest 1/100 of 1 percent
	Percentages				
1934.....	17.92	13.42	10.15	5.18	1.80
1935.....	18.26	13.74	10.44	5.35	1.85
1936.....	19.56	15.09	11.60	5.96	2.04
1937.....	17.81	13.63	10.40	5.28	1.82
	Indexes (1934=100)				
1934.....	100.00	100.00	100.00	100.00	100.00
1935.....	101.90	102.38	102.86	103.28	102.78
1936.....	109.15	112.44	114.29	115.06	113.33
1937.....	99.39	101.56	102.46	101.93	101.10

<sup>1</sup> Economic incomes with the statutory realized capital gains and losses. Total individual income excludes work relief, direct relief, and veterans' adjusted-service compensation. For limitations of data resulting from inclusion of statutory realized capital gains and losses rather than actual realized capital gains and losses see appendix note B-2.

Source: Incomes of selected proportions of income recipients from appendix table A-2. Total individual income, excluding relief and veterans' adjusted-service payments, was obtained by deducting from data in appendix table A-3 the figures on work-relief wages given in table 20.

Work-relief wages as a percentage of total income varied from 3.7 percent in 1936 to 2.4 percent in 1935 and 1937. Because of this varying importance, there are small differences in the magnitude of the year-to-year shifts in income concentration depending on whether work-relief wages are included in total income, as in chapter II, or excluded from total income, as in table 21. Work-relief earnings were a slightly larger proportion of total income in 1934 than in 1935 and consequently the income shares of the higher income groups are increased more in 1934 than in 1935 by the exclusion of work-relief wages. The rise in income concentration from 1934 to 1935 is, therefore, reduced somewhat when work-relief earnings are excluded from total income. In contrast to 1935, the increase in income concentration in 1936 is greater when work-relief wages are excluded. This follows from the fact that the exclusion of work-relief earnings results

in a larger increase for 1936 than for 1935 in the size of the income shares received by the higher income groups. For the 2-year period of rising income concentration from 1934 through 1936, the exclusion of work-relief wages results in a slightly larger increase in income concentration. There is an indicated rise of 12.4 percent in the income share of the highest 1 percent, excluding work relief from total income, and a rise of 11.5 percent, including work relief as income. In 1937, the decline in income concentration is greater with work-relief payments excluded from the total individual income. Largely because the year of highest income concentration, 1936, was also the year in which work-relief earnings were the largest percentage of total income, the fluctuations in income concentration during this period are slightly smaller when work-relief payments are included in income than when these payments are excluded.

2. *Statistics of Income Concentration, Including Direct and Work Relief and Veterans' Adjusted-Service Compensation Payments, 1934-37.*

Table 22 shows the size of the income shares of the selected proportions of income recipients when work relief, direct relief, and the soldiers' bonus are included in the total of individual incomes.<sup>26</sup> As indicated at an earlier point, the inclusion of these items involves no double counting and for this reason separate measures of income concentration may be presented with no deductions for the transfer of incomes. The inclusion of direct relief and, from some points of view, work relief and the veterans' bonus involves a departure from the concept of earning power or acquired income. The data in this section are of interest in showing the effect of these payments on the concentration of income among income recipients. The use of income recipients as the units for distributing income when direct relief payments are included is not altogether satisfactory. It will be recalled that when the term, "income recipient," was defined,<sup>27</sup> persons receiving direct relief were not necessarily included as income recipients. This term was restricted to persons usually in receipt of income from personal services or from the ownership of property. To the extent that direct relief was received by totally dependent individuals or families without an income recipient, the concentration of income shown in table 22 is understated.

<sup>26</sup> It was assumed that the entire bonus was paid to the lower 98 percent of income recipients. Actually, a small part of the bonus was received by the highest 2 percent but as the bonus was exempt from income taxation, the amounts received are not included as income for the higher income recipients. The amount of bonus received by the higher proportions of income recipients undoubtedly constituted a negligible addition to their incomes and no attempt was made to correct for its exclusion.

<sup>27</sup> See ch. II, pp. 12-13.

TABLE 22.—*Shares of total individual income, including relief and veterans' adjusted service payments, received by selected proportions of income recipients, 1934-37<sup>1</sup>*

Group of income recipients

Year	Highest 2 percent	Highest 1 percent	Highest ½ of 1 per- cent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
Percentages					
1934.....	17.16	12.85	9.72	4.96	1.72
1935.....	17.50	13.17	10.00	5.13	1.77
1936.....	18.24	14.02	10.81	5.56	1.91
1937.....	17.12	13.10	9.99	5.07	1.74
Indexes (1934=100)					
1934.....	100.00	100.00	100.00	100.00	100.00
1935.....	101.98	102.49	102.88	103.43	102.91
1936.....	106.29	109.49	111.21	112.10	111.05
1937.....	99.77	101.95	102.78	102.22	101.16

<sup>1</sup> Economic incomes with the statutory realized capital gains and losses. Total individual income includes work relief, direct relief, and veterans' adjusted-service compensation. For limitations of data resulting from inclusion of statutory realized capital gains and losses rather than actual realized capital gains and losses see appendix note B-2.

Source: Incomes of selected proportions of income recipients from appendix table A-2. Total individual income, including relief and veterans' bonus payments, was obtained by adding to data in appendix table A-3 the figures on direct relief and veterans' adjusted-service payments given in table 20.

Prior to 1934 the inclusion of relief and bonus payments does not significantly affect the measures of income concentration. In 1929 and 1930, the shares received by the highest 1 percent of income recipients are virtually unchanged by the additional types of incomes. In 1931 the income share of the highest 1 percent of income recipients is reduced from 13.72 to 13.44 percent, when these income items are included in the total income. This reduction is largely the result of the loans of \$912,000,000 to veterans on their adjusted-service certificates. In 1934 the income share of the highest 1 percent of income recipients is 12.85 percent as compared with 13.42 when the relief and bonus payments are excluded. The year of the largest difference is 1936 when these forms of income accounted for 6.9 percent of total individual income. Table 21 shows that in 1936 the highest 1 percent of income recipients received 15.09 percent of the total individual income and table 20 shows that when these types of income are included their share declines to 14.02 percent. If work relief earnings are included in the total income, the share of this group is 14.53 percent.

The inclusion of the relief and bonus payments diminishes to a small extent the magnitude of the fluctuations in the degree of income concentration. Thus, as shown in table 21, from 1934 through 1936 the income share of the highest 1 percent of income recipients rose by 12.4 percent and according to the data in table 22 by only 9.5 percent when the relief and bonus payments are included in the total income of all individuals. The decline in the degree of income concentration during 1937 is slightly smaller when the total individual income includes relief payments and the veterans' bonus than when these items are excluded.

## APPENDIX A

### NOTES TO TABLES

#### NOTE A-1

This note describes the methods used in deriving the data presented in tables 1, 2, 3, 4, and 5 of chapter II. The limitations of the data and of the adjustments are also indicated.

#### INCOME DISTRIBUTIONS FOR THE HIGHER INCOME RECIPIENTS

The basic data on the higher incomes were obtained from the tabulations of the Federal income-tax statistics which have been published annually by the Treasury Department in volumes entitled *Statistics of Income*. Basic tables 3 and 7 on individual income-tax returns of the annual issues of the *Statistics of Income* provided, for the most part, the required information on the number of individuals in each income class and on the amount of their incomes.<sup>1</sup> Table 7 has the following title in recent issues of the *Statistics of Income*: "Individual returns, 1936, by net income classes—sources of income and deductions and net income \* \* \*." This table presents the data by 34 net-income classes above \$5,000 and, except for the years 1918–26, in one income class from zero to \$5,000. For the years 1918 through 1926 the data below \$5,000 are presented in thousand-dollar income intervals. Table 3 of the *Statistics of Income* presents for all years the number of returns and net income by thousand-dollar income classes below \$5,000 as well as by the 34 income classes above \$5,000. The data published in the *Statistics of Income* are based on unaudited returns and include data from amended returns showing net income of \$100,000 and over; but not from amended returns with net income under \$100,000 or from tentative returns. For net incomes of \$5,000 and over the data are tabulated from each return and for net income of less than \$5,000 the data are estimates based on a sample.<sup>2</sup>

#### 1. *Statutory Net Incomes of the Higher Income Recipients.*

For the years 1918–23 and 1934–37 the statutory net incomes were taken directly from table 3 of the *Statistics of Income* of each year.<sup>3</sup> For the years 1924 through 1931 it was necessary to adjust the data

<sup>1</sup> The income distributions presented in the *Statistics of Income* include the incomes of trusts and estates. In 1935 data on trusts and estates were first tabulated separately. (See *Statistics of Income* for 1935, table 5.) With the statistics for 1935 and 1936 it can be easily shown that the inclusion of these data in the income distribution has but a slight effect on the income shares received by the various proportions of income recipients and that the effect on the indicated changes in income concentration may be ignored. In 1935, for example, statutory net income of the highest 1 percent of income recipients including estates and trusts, constituted 11.1 percent of total individual income and, if the net incomes of estates and trusts are excluded, the percentage is 11.0 percent. The incomes of estates and trusts are included in the total of individual incomes. See appendix note B-3, p. 106, for further discussion.

<sup>2</sup> Individual returns with net income under \$5,000 filed on Form 1040, which display income characteristics similar to those usually found in returns with net income of \$5,000 and over, are also tabulated. The data for net incomes under \$5,000 were estimated on the basis of a sample for 1918 through 1927 and for 1929, and partly estimated and partly tabulated for 1928, 1930, and subsequent years. For discussion of validity of method used prior to 1928, see *Statistics of Income* for 1928, pp. 19–24. Except for some of the earlier years, the annual issues of the *Statistics of Income* contain a description of the methods used of tabulation and estimation. For the earlier years, see "Income forecasting by the use of statistics of income data," *Review of Economic Statistics*, vol. XII, No. 2 (May 1930), by J. F. Ebersole, S. S. Burr, and G. M. Peterson.

<sup>3</sup> The statistics for 1923 were revised subsequent to the publication of the *Statistics of Income* for 1923 and the revised figures were used. (See *Statistics of Income* for 1925, pp. 28–29.)

for the realized capital losses on assets held over 2 years that were reported for a tax credit and not deducted from other income. The amounts of these losses were obtained by multiplying by eight the tax credit,  $12\frac{1}{2}$  percent of the loss, given in table 2 of the annual issues of the Statistics of Income. These losses were deducted from the aggregate net income of each income class. No attempt was made to transfer individuals to lower income classes because of the deduction of these losses. The deduction of these capital losses would obviously result in some redistribution of the individuals reporting such losses among the various income classes. It should be noted that when income concentration is measured by taking the aggregate income of various proportions of income recipients the distribution of income within each proportion need not be accurate. However, when the adjustments to income result in the transfer of individuals from one proportion to another, the measures of income concentration are affected. The law so operated that only those with statutory net incomes of over approximately \$30,000 (over \$25,000 in 1924) reported their capital losses on assets held over 2 years by the tax-credit method. With the available data<sup>4</sup> and with the use of certain assumptions it can be shown that the inability to transfer these income recipients to their proper income class results in only a slight understatement of the aggregate incomes of the various proportions of income recipients and, hence, of the percentages of total income received by them during the years 1924 through 1931. The understatement is negligible for the highest 1 percent or 2 percent but becomes somewhat more important for the smaller proportions of income recipients. More important for the purpose of measuring changes in income concentration is the fact that the understatement is greater in years of large realized capital losses. This tends to exaggerate the increases and declines in income concentration. However, as indicated above, there is evidence that the understatement is so small that changes in the degree of understatement may be disregarded.<sup>5</sup> As a further consequence of the method

<sup>4</sup> The available data show the total amount of these capital losses (Statistics of Income, table 2); the distribution of the amount of these losses by net income classes (table 2); and the distribution of individuals reporting a loss for tax credit by the size of the capital loss (available only for the years 1929-31, see, for example, the text table in Statistics of Income for 1929, p. 12).

<sup>5</sup> To cite two of the examples which have been worked out to determine the importance of this limitation for the indicated changes in income concentration: In 1929 the minimum statutory net income of the highest 1 percent of income recipients was \$8,680. If we make the extreme assumption that all those reporting a capital loss for tax credit had a statutory net income of \$30,000, then, according to the text table on p. 12 of the Statistics of Income for 1929, 439 individuals reported a capital loss for tax credit larger than \$21,320. With a capital loss of \$21,320 these individuals would fall below the minimum income level for the highest 1 percent of income recipients. The above assumption is the most extreme one that could be adopted as most of those reporting a loss for tax credit had incomes considerably larger than \$30,000, in fact, 66 percent of the losses for tax credit were reported by individuals with net incomes of \$100,000 and over. We can then make another far-fetched assumption that the deduction of these losses would give all these 439 individuals incomes of zero; that is, the capital loss was as large as their other income. If this were so, the income of the highest 1 percent would be understated by \$3,811,000. This figure is derived by substituting for the assumed incomes of the 439 individuals reporting a capital loss for tax credit the same number of incomes at the minimum income level for this group, \$8,680. With these extreme assumptions the proportion of total income received by the highest 1 percent of income recipients would be five-thousandths of 1 percent larger. The data as given to two decimal places in table 1 would not be affected. When the same assumptions are made for 1931, the percentage of total income received by the highest 1 percent of income recipients would be increased by two-hundredths of 1 percent.

The comparison between these 2 years is one of the most extreme that could be made and when the above data are compared with the indicated changes in income concentration it is readily seen that this limitation may be ignored. Similar calculations may be carried out for the other proportions but the combination of assumptions becomes too complicated for presentation. In 1929, 3,111 individuals reported a capital loss for tax credit, in 1930, 4,318, and in 1931, 5,593. The number of individuals reporting such losses for the years 1924 through 1928 was, of course, less than in 1930 and 1931, but no data are available for these years. The amounts of losses reported for tax credit on the sale of assets held over 2 years are given below in millions of dollars for the years 1924 through 1931. The data are taken from table 2 of the annual issues of the Statistics of Income:

[In million of dollars]

1924.....	72	1927.....	48	1930.....	81
1925.....	61	1928.....	41	1931.....	193
1926.....	35	1929.....	43		

of treating the incomes of individuals reporting a capital loss for tax credit during the years 1924 through 1931, the minimum income levels for these years (table 4) are subject to some overstatement and the average incomes (tables 7 and 8) to some understatement.

Due to a change in the Revenue Act of 1934 with respect to the treatment of realized capital gains and losses it was necessary to adjust the data for that year in order to make the income concept comparable with the preceding years.<sup>6</sup> This adjustment was made possible by a special tabulation of the 1934 income-tax data, made available by the Treasury Department, giving the full amount of realized capital gains and losses. With this information and the data on statutory capital gains and losses it was possible to add and subtract, by income classes, amounts so that realized capital gains and losses would be fully taken into account.<sup>7</sup>

## 2. *Economic Incomes of the Higher Income Recipients.*

To statutory net income the following items were added by income classes in order to obtain economic income for the years 1926-31 and 1934, and for the years 1934 through 1937: Contributions, taxes paid, interest paid, tax-exempt interest on governmental securities, and "other deductions" consisting largely of losses due to bad debts, uninsured losses due to fire and theft, losses from worthless securities, and various other deductions. The items, exclusive of tax-exempt interest, consist of legal deductions from total income to arrive at statutory net income and were taken from the annual issues of the Statistics of Income (table 7).<sup>8</sup> Tax-exempt interest on governmental securities for the years after 1923 was secured from a table in the Statistics of Income showing the interest received from tax-exempt obligations.<sup>9</sup> The reporting of this income was for informa-

<sup>6</sup> For an explanation of the change in the law, see appendix note B-2, pp. 101-2.

<sup>7</sup> As was the case with the deductions for realized capital losses reported for tax credit this adjustment results in a slight understatement of the incomes of the various proportions of income recipients as it was not possible to transfer individuals from one income group to another. That the understatement is small may be determined with the use of the special tabulation of actual capital gains and losses showing by income classes the number of individuals with a capital loss of \$2,000 and over and the amount of actual capital losses. The number of individuals with losses of \$2,000 and over in each of the selected proportions of income recipients is given in appendix table B-4, p. 104. As a further consequence of the limitations of this adjustment, the first group of minimum incomes for 1934 in table 4 are overstated and the first group of averages for 1934 in tables 7 and 8 are understated.

<sup>8</sup> As the minimum statutory net incomes of the highest 2 percent of the income recipients fell below \$5,000 during the years 1930, 1931, and 1934 through 1937 it was necessary to estimate the amount of deductions for the \$4,000 to \$5,000 class and for the \$3,000 to \$4,000 class (1931, 1934, and 1935 only). This was done by extrapolating the ratios of the sum of the four deductions and tax-exempt interest to net income into these income classes.

Business and partnership losses were not tabulated separately for the years prior to 1930 but were included with "other deductions." As net losses incurred by individuals from unincorporated businesses and partnerships should be deducted in order to secure economic income, it was necessary to prepare estimates of these losses in order to exclude them from "other deductions" for the years 1926 through 1929. The estimates were made in the following manner: The ratios of business and partnership losses to "all other deductions" were computed for the years 1930 through 1936 by net income classes. In this case taxes paid and interest paid were added to "all other deductions" as these deductions were not tabulated separately until 1928. On the basis of the year-to-year movement of these ratios and on information relating to the volume of business and partnership losses, such as the volume of corporate deficits and business savings of entrepreneurs, years from 1930 through 1936 were selected which were thought to be comparable, with respect to the volume and distribution of business and partnership losses, to each of the years from 1926 through 1929. Thus the ratios for 1936 were applied to 1929 and 1927 and the ratios for 1935 to 1928 and 1926. Because of the relatively small amounts of business and partnership losses any error in the estimate would have an almost insignificant effect on the incomes of the various proportions of income recipients. In 1931, for example, business and partnership losses for net incomes of \$5,000 and over amounted to \$72,000,000, or less than nine-tenths of 1 percent of the economic income of this group.

In order to secure the economic incomes of the highest 1 percent of income recipients for the years 1918 through 1925, it was necessary to estimate the business and partnership losses of this group. This was done in somewhat the same manner as for the years 1926 through 1929 except that the losses were estimated for the \$5,000 and over group as a whole, and then separately for several of the thousand-dollar income classes above \$5,000.

<sup>9</sup> In the Statistics of Income for 1927, for example, this table appeared as table 8, pp. 85-86. The column headed "Total Interest Received" was used. As this total includes the taxable interest on partially tax-

tional purposes only and the amount of tax-exempt interest shown in these tables is understated because the schedule frequently is not completely filled out.<sup>10</sup>

In order to obtain the economic incomes of the highest 1 percent of income recipients for the whole period it was necessary to estimate realized capital losses for the years 1918-25 and tax-exempt interest for the years 1918-19, and 1921-23 as this information was not available for these years.<sup>11</sup> The estimate of realized capital losses for the years 1918 through 1925 were needed since during these years they were tabulated in one classification with interest paid, taxes paid, contributions, and "other deductions." (See appendix note A-5, p. 93, for method of estimate.) Following is a description of the method for estimating tax-exempt interest:

(a) *Estimate of tax-exempt interest received from wholly tax-exempt securities by those with net incomes of \$5,000 and over, 1918, 1919, 1921-23.*—Ratios were calculated for each of the years 1920 and 1924 through 1936 of interest received by this group from wholly tax-exempt securities to the amount of such securities outstanding.<sup>12</sup> On the basis of a study of these ratios in relation to changes in surtax rates and the number of returns and net income above \$5,000 it was decided to apply the ratio for 1920 to the amounts of securities outstanding during the years 1918 through 1919 in order to obtain an estimate of interest received from wholly tax-exempt securities by the \$5,000-and-over group. The amount of interest for the year 1920 was kept constant for 1921. The ratios for the years 1922 and 1923 were obtained by interpolating between the ratios for 1921 and 1924.

(b) *Estimate of taxable and nontaxable interest received from partially tax-exempt securities by those with net incomes of \$5,000 and over, 1918, 1919, 1921-23.*<sup>13</sup>—These estimates were prepared by a method similar to that above. The ratios of this interest received to the amount of partially tax-exempt securities outstanding was obtained for the years 1924 through 1936. On the basis of the behavior of these ratios, it was decided to use the 1924 ratio in each of the preceding years.

The above method for estimating interest received from governmental securities is obviously arbitrary, but the results seemed reasonable both in absolute amounts and as a ratio to the net income of those in the \$5,000-and-over net-income class. The

exempt securities, as given in Statistics of Income, table 7, the amount given in table 7 was excluded from economic income. In the 1936 volume this information was contained in an unnumbered table on p. 30. These data are given only for those with net incomes of \$5,000 and over.

<sup>10</sup> See Statistics of Income for 1936, p. 28.

<sup>11</sup> The statistics on tax-exempt interest for 1920 were published in the Annual Report of the Secretary of Treasury, for 1923, p. 383. These data are somewhat defective for the present purpose in that presumably they include tax-exempt compensation received; that is, salaries of employees of State and local governmental units and judges of Federal courts. However, the aggregate amount of this income received in 1920 by individuals whose statutory net income was in the income brackets with which we are concerned is relatively insignificant. In view of this and of the under reporting of tax-exempt interest, the inclusion of this compensation is an unimportant limitation of the data. These statistics for 1920 do not include the taxable and nontaxable interest on partially tax-exempt securities and it was therefore necessary to prepare an estimate for it.

<sup>12</sup> Net outstanding wholly tax-exempt securities minus short-term securities as of December 31 of each year. These totals, therefore, exclude such securities in State and Federal sinking funds and short-term securities which are largely held by financial institutions. Data from Annual Reports of the Secretary of Treasury.

<sup>13</sup> The taxable interest received from these securities is included as part of statutory net income and is tabulated separately in Statistics of Income, table 7. It was not thought feasible to attempt to estimate the nontaxable interest received from partially tax-exempt securities separately and, therefore, the total amount of interest received from partially tax-exempt securities was estimated. The taxable interest shown in table 7 was then excluded from economic income.

estimates of interest received from wholly tax-exempt and partially tax-exempt securities by individuals with net incomes of \$5,000 and over for the years 1918 through 1923 are as follows:

[Millions of dollars]

1918.....	158	1920.....	188	1922.....	210
1919.....	191	1921.....	186	1923.....	223

In order to secure the amounts of interest received by the highest 1 percent of income recipients, it was necessary to know the distribution of this interest for several of the thousand-dollar-net-income classes above \$5,000.<sup>14</sup> The percentage distribution of this interest in 1920<sup>15</sup> was applied to the 1918, 1919, and 1921 totals and the percentage distribution in 1924 was applied to the 1922 and 1923 totals.<sup>16</sup>

It should be noted that the passage from statutory net income to economic income is not completely satisfactory as the addition of the four types of deductions and tax-exempt interest to statutory net income would result in some change in the ranking of individual incomes; that is, the relative position of individuals when classified according to the size of their economic incomes would be somewhat different from the position they occupy when the classification is on the basis of statutory net income. What the statistics on income concentration actually show, for example, is the proportion of total economic income received by the 1 percent of individuals with the highest statutory net incomes. In the analysis of the data it was assumed that the distribution of individuals by their economic incomes is identical with the distribution of individuals by their statutory net incomes. While there is doubtless a very high degree of correlation between the distribution of individuals by statutory net income and by economic income, the proportion of total economic income received by the individuals with highest statutory net incomes would obviously be somewhat less than the proportion of total economic income received by those with the highest economic incomes. As this study is concerned more with changes in income concentration than with the actual degree of concentration in any one year, this small understatement is not important, provided it is approximately the same from year to year. Unfortunately sufficient information is not available with which to determine statistically the extent of the understatement nor of the changes in the degree of understatement from one period to another.<sup>17</sup>

There is reason to believe, however, that the understatement is slight and that, therefore, any year-to-year variation in the degree of understatement is relatively slight. The items involved in transforming statutory net income to economic income are each comparatively small and are of such a nature that the size of the items is closely related to the size of statutory net income. In addition, with

<sup>14</sup> For the \$5,000 to \$6,000 net-income classes in 1918 and 1921 and for the \$5,000 to \$6,000 and the \$6,000 to \$7,000 net-income classes in the other years.

<sup>15</sup> Wholly exempt interest from Annual Report of the Secretary of Treasury for 1923 and taxable interest from partially tax-exempt securities from Statistics of Income for 1920 (table 7).

<sup>16</sup> As the amounts of this interest received in \$5,000 to \$6,000 and the \$6,000 to \$7,000 net-income classes is relatively small, less than \$6,000,000 at the most, any error in the estimated distribution may be ignored for the present purpose.

<sup>17</sup> Ideally the necessary data would show for several years in different phases of the business cycle the distribution of individuals according to their economic incomes; that is, their statutory net incomes including actual, as distinct from statutory realized capital gains and losses plus the 4 types of deductions and tax-exempt interest. As will be made clear by the following discussion, it would be highly desirable to secure income data in this form.

the exception of tax-exempt interest, the major portion of individuals in each income class reported each type of deduction.<sup>18</sup>

It may be noted again that when income concentration is measured by taking the aggregate income of the various proportions of income recipients, the distribution of income within each proportion need not be accurate. However, when the adjustments to income result in the transfer of individuals from one proportion to another, the measures of income concentration are affected. In determining the degree of understatement in the measures of income concentration the amounts to be taken into consideration are the differences between the economic incomes of those included in the given proportion of income recipients and those who would be included if the incomes were classified according to economic income rather than statutory net income. It is believed that only a relatively small proportion of income recipients would be shifted from one group to another and that the net difference in the aggregate income is small.

Some knowledge as to the year-to-year constancy or variability in the degree of understatement may be obtained by examining the amounts by which economic income exceeds statutory net income in different years. Such information is presented in appendix note B-1. These data show that the amounts to be added to statutory net income in order to secure economic income were relatively larger in years of diminished incomes than in years of increased incomes. As indicated in appendix note B-1 this seems to be due to the fact that from year to year the deductions and receipt of tax-exempt interest were more stable than economic income and, therefore, when income declined the deductions constituted a larger percentage of income. It may be that the larger the difference between statutory net income and economic income the smaller is the correlation between the distributions of statutory net income and of economic income. If this were so, the degree of understatement would be greater in years of low income. In terms of the measures of income concentration this would mean that the declines in income concentration would be overestimated. Several considerations indicate that, if this is the case, the extent to which the changes in income concentration are overestimated is probably quite small.

First, it should be pointed out that with a general decline in incomes the difference between statutory net income and economic income could increase with no change in the correlation between the two distributions. This increase would be due to the greater stability, as compared with economic income, of the statutory deductions from income. It seems reasonable to expect that a substantial part of this increase is due to a change of this sort.

Second, the year-to-year differences in the ratios of the four types of deductions and tax-exempt interest to statutory net income are relatively small for the larger groups of income recipients. However, as the group of income recipients becomes smaller these differences increase. The data in tables B-1 and B-3 of appendix note B-1 (pp. 99 and 101) are not in the most appropriate form for showing

<sup>18</sup> Data showing the number of individuals reporting interest paid, contributions, and taxes paid are available by income classes for individuals with net incomes of \$5,000 and over for the years 1934 through 1936. In 1936, for example, the proportion of individuals in each income class reporting interest paid as a deduction varied from 50 percent for the \$5,000 to \$6,000 net income class to 80 percent for the \$1,000,000 and over class. For taxes paid the corresponding percentages are 81 percent to 97 percent and for contributions the percentages are 74 percent and 85 percent. See table 7 of Statistics of Income for 1936.

the year-to-year differences. These tables present the percentages that the aggregate statutory net income received by the various proportions of income recipients constituted of their economic income. However, the difference between the distributions according to economic income and statutory net income is important insofar as individuals who are included, within the highest 1 percent of income recipients, for example, when the classification is according to statutory net income would not be included when the basis for the classification is economic income. This redistribution would take place, for the most part, around the lower income limit of the highest 1 percent of income recipients and therefore the difference between statutory and economic income should be measured at this point. According to the data on minimum income levels as given in table 1 for economic income and those given in table 4 for statutory net income, the statutory net incomes at the lower income limit of the highest 1 percent of income recipients were increased by 15 percent in 1928, the year of greatest income concentration, and by 16 percent in 1920 and 16.6 percent in 1934, the years of lowest income concentration. It is not believed that differences of this magnitude are indicative of appreciable differences among the various years in the extent to which a redistribution of individuals would take place about the lower income limit of this group. These differences are larger for the smaller proportions of income recipients, and hence any year-to-year differences in the degree of understatement that exist are greater for these groups.

#### STATUTORY NET INCOMES AND ECONOMIC INCOMES OF SELECTED PROPORTIONS OF INCOME RECIPIENTS

Thus far, the method of obtaining the distribution by income classes of statutory net income and economic income has been described. The next step was to secure the amounts of income received by the selected proportions of income recipients. Using the number of individuals in the various proportions of income recipients, shown in table 6, the minimum statutory net incomes and the aggregate amounts of economic and statutory net incomes of these groups were obtained by interpolation.<sup>19</sup>

The aggregate statutory net income received by the selected proportions of income recipients for the years 1918 through 1931 and 1934 through 1937 are given in appendix table A-1 and the aggregate economic income for the years 1926, 1931, and 1934 through 1937 are given in appendix table A-2. The amount of economic income of the highest 1 percent of income recipients is given in table 12 for the years 1918 through 1925 as well as for later years.<sup>20</sup> The minimum statutory net incomes of the selected groups of income recipients are presented in table 4. The minimum economic income levels for the highest 1 percent of income recipients, presented in table 1, were

<sup>19</sup> The method of interpolation generally used was first to draw, with the aid of a flexible rule, a cumulative curve of the number of returns. This was done for six or seven income classes adjacent to the class in which the minimum income of the given group of income recipients was located. Second, the minimum income level of the group of income recipients was "read" from this curve by taking the level above which the number of income recipients in the given income group was located. These income levels are presented in table 4. Third, cumulative income curves were drawn in the same manner as the curves for the number of returns. Fourth, the aggregate income received by each of the income groups was obtained by "reading" from the curve, the amount of income above the given income levels.

<sup>20</sup> The amount shown in table 12 for 1923 is overstated by \$61,000,000. See appendix note A-5, p. 89.

obtained by determining the difference between statutory net income and economic income at the given statutory net income levels and adding this difference to the minimum statutory net income levels. The minimum economic incomes for the years 1934 through 1937, shown in table 5, were obtained in the same manner.

TABLE A-1.—*Aggregate statutory net income of selected proportions of income recipients, 1918-37*<sup>1</sup>

[Millions of dollars]

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
1918	7,995	6,125	4,775	2,578	936
1919	9,360	7,240	5,575	2,890	990
1920	9,070	6,820	5,118	2,455	760
1921	7,690	5,740	4,280	2,042	615
1922	8,900	6,815	5,197	2,627	902
1923	9,580	7,175	5,465	2,705	915
1924	10,330	8,105	6,200	3,078	1,036
1925	12,935	10,220	7,990	4,260	1,642
1926	13,125	10,360	8,053	4,355	1,727
1927	13,920	11,065	8,710	4,820	1,944
1928	16,380	13,320	10,775	6,375	2,769
1929	16,080	12,990	10,485	6,307	2,877
1930	11,040	8,450	6,452	3,415	1,347
1931	8,320	6,120	4,520	2,205	780
1934	6,840	5,040	3,762	1,867	647
1934	7,160	5,310	3,975	1,953	652
1935	8,060	6,085	4,575	2,282	767
1936	10,330	7,940	6,065	3,040	1,005
1937	10,210	7,735	5,840	2,883	950

<sup>1</sup> Due to a change in the definition of realized capital gains and losses the table is divided into 2 parts—1918-34 and 1934-37. In the latter period varying proportions of gains and losses are included depending upon the length of time the asset was held and losses were limited for each individual to \$2,000 in excess of gains. The first set of figures for 1934 are comparable to those for the preceding years.

TABLE A-2.—*Aggregate economic income of selected proportions of income recipients, 1926-37*<sup>1</sup>

[Millions of dollars]

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
1926	15,285	12,075	9,382	5,075	2,010
1927	16,080	12,825	10,083	5,600	2,255
1928	18,735	15,260	12,327	7,269	3,125
1929	18,515	14,970	12,070	7,215	3,245
1930	12,990	10,005	7,675	4,105	1,627
1931	10,050	7,450	5,530	2,770	1,022
1934	8,373	6,255	4,730	2,440	868
1934	8,710	6,525	4,935	2,518	873
1935	9,720	7,320	5,558	2,850	965
1936	12,040	9,290	7,140	3,670	1,258
1937	12,050	9,220	7,035	3,570	1,228

<sup>1</sup> Due to a change in the definition of realized capital gains and losses, the table is divided into 2 parts—1926-34 and 1934-37. In the latter period varying proportions of gains and losses are included depending upon the length of time the asset was held and losses were limited for each individual to \$2,000 in excess of gains. The first group of figures for 1934 are comparable to those for the preceding years.

PERCENTAGES OF TOTAL INDIVIDUAL INCOME RECEIVED BY THE SELECTED  
PROPORTIONS OF INCOME RECIPIENTS

These percentages, presented in tables 1, 2, and 3, were derived from the data in the preceding two tables and from estimates of total individual income. For reasons indicated in appendix note A-3, the salaries and wages received by employees of State and local governments were excluded from total individual income. Estimates of total individual income are given in table 10. The salaries and wages of employees of State and local governments, given in appendix table A-5, p. 83, were deducted from these totals. Appendix table A-3 contains the estimated total income of individuals excluding the compensation of State and local governmental employees.

TABLE A-3.—*Total individual income excluding compensation of State and local governmental employees, 1918-37*

[In millions of dollars]

Year	Amount	Year	Amount	Year	Amount
1918.....	\$58,621	1925.....	\$72,405	1934.....	\$49,400
1919.....	64,612	1926.....	74,484		
1920.....	67,850	1927.....	74,654	1934.....	50,028
1921.....	53,129	1928.....	79,224	1935.....	54,561
1922.....	57,585	1929.....	81,050	1936.....	63,943
1923.....	66,657	1930.....	68,409	1937.....	69,387
1924.....	67,422	1931.....	54,288		

Source: Table 10 and appendix tables A-4.

NOTE A-2.<sup>21</sup> TABLE 6—NUMBER OF INDIVIDUALS IN THE SELECTED  
PROPORTIONS OF INCOME RECIPIENTS

The total number of income recipients, except for the years 1918 and 1919, were taken from estimates of the number of persons with gainful occupations by Mr. Daniel Carson of the National Research Project, Work Projects Administration.<sup>22</sup> These are annual estimates of the average number of persons with gainful occupations as enumerated in the decennial census. The estimates account for the changing age composition in the population, for immigration and emigration, and farm-city migration. An adjustment was made in the 1930 census figure for an estimated undercount of 325,000 young people who had entered the labor supply but were omitted because of lack of previous work experience. Mr. Carson has also made other adjustments of the census data for an undercount of farm family workers and farm hired laborers and for the seasonal labor supply, but these adjustments were not used in the present study. The figures for the years 1918 and 1919 were derived from estimates for these years by Willford I. King presented in his volume, *The National Income and Its Purchasing Power* (p. 47). From the total

<sup>21</sup> In connection with this note see discussion in ch. II, pp. 12-13.

<sup>22</sup> These estimates are presented in a study of the National Research Project entitled *Labor Supply and Employment, Preliminary Statement of Estimates Prepared and Methods Used*, (mimeographed) by Daniel Carson assisted by Henrietta Liebman. See table 46, p. 136. The total of the first 2 columns in this table were used.

number of persons with gainful occupations, the number of employees of State and local governments, given in appendix table A-5, was deducted. The resulting total is presented in the first column of table 6. Table A-4 contains the estimated number of persons with gainful occupations for the years 1918 through 1937.

TABLE A-4.—*Number of persons with gainful occupations, 1918-37*

Year	Persons	Year	Persons	Year	Persons
1918.....	42, 193, 000	1925.....	45, 722, 000	1932.....	50, 503, 000
1919.....	42, 092, 000	1926.....	46, 412, 000	1933.....	51, 065, 000
1920.....	41, 818, 000	1927.....	47, 126, 000	1934.....	51, 687, 000
1921.....	42, 633, 000	1928.....	47, 845, 000	1935.....	52, 329, 000
1922.....	43, 218, 000	1929.....	48, 555, 000	1936.....	52, 937, 000
1923.....	44, 052, 000	1930.....	49, 327, 000	1937.....	53, 561, 000
1924.....	45, 008, 000	1931.....	49, 931, 000		

Source: See text.

It should be noted that the term "income recipient" can be applied to the income tax data only with certain qualifications. Strictly, what the data show are the number of returns in the various income classes. Because of methods of classification and the legal definition of an income receiving unit, an income tax return may not necessarily correspond to an income recipient as defined in this report.

The inclusion of trusts and estates as individual returns has been discussed at an earlier point (appendix note A-1, p. 71). In the income tax data the incomes of husband and wife filing a joint return appear as one income. To a considerable extent a joint return represents two income recipients. If interest lies in showing the distribution of income in a given year, it seems that it would be desirable to make some adjustment for this treatment of incomes. In the two studies of the distribution of income in a single year cited in chapter II, however, no mention is made of any adjustment. For the present study, this type of adjustment is not important for two reasons. First, the determination of the exact concentration of income in any given year is not the primary objective, and, second, it seems probable that joint returns are not generally filed in the income classes for which the income tax data have been used. If a husband and wife have two incomes and the sum of these two incomes places the combined income in the surtax brackets, a tax saving would result from the filing of separate returns and, doubtless, in most cases, individuals take account of this and file separate returns. In all the years covered in this study the minimum statutory net income of the highest 1 percent was well above the minimum income for which surtax rates are applicable or the minimum income at which the normal tax rate is increased. This is also true of the minimum statutory net income of the highest 2 percent with the exception of the years 1918, 1931, 1934, 1935, and 1936 when the rates were increased on net incomes above \$4,000 and the minimum net incomes were, respectively, \$3,980, \$3,960, \$3,275, \$3,460, and \$3,900 (table 4, p. 26). It may be, therefore, that in these years there is some very slight overstatement in the income shares shown for the highest 2-percent group. It should, perhaps, be mentioned that if one spouse incurs a loss, a joint return may be filed and, therefore, a joint return may appear in the income tax data instead of a separate return of somewhat larger size.

A related question concerns the community property laws of eight States. Under these laws the incomes, with certain exceptions, of both husbands and wives are evenly divided for income-tax purposes. The question that is of present concern is the effect of this treatment on the indicated shifts in income concentration. A study has been made taking into consideration the number of States having these laws over the period, the amounts of income involved, and the methods of tabulating these returns. This study disclosed that there would be a very slight effect on the indicated measures of income concentration of the changes in the above three factors. The most important was the change in the California law effective in 1928 and under extreme assumptions it can be shown that any decrease in the aggregate income of the highest 1 percent due to the change in the method of reporting may be ignored for the present purpose.

Another problem is introduced by the separate returns of husbands and wives. To some extent wives filing separate returns on income from property would not be classified as persons with gainful occupations and would, therefore, be excluded from the census enumeration, and hence from the basic data on the number of income recipients. For the present study, the relevant question is whether there has been a disproportionate increase in these income recipients excluded from the basic data on income recipients. A second and somewhat different question relates to the division of income between husband and wife for the purpose of minimizing tax liability and the effect of this on the indicated shifts in income concentration. In these connections the following data may be cited: The percentage of incomes included in the highest 1 percent represented by those of wives filing separate returns has been quite small, varying from 3.2 percent in 1919 to 7.4 percent in 1928 and the average for the years 1934-36 was 5.3 percent, only slightly higher than the average of 4.7 for the years 1918 through 1924. The increase has been somewhat larger for the smaller proportions of income recipients. Part of this rise is due to the increase in the proportion of women with gainful occupations and, therefore, the data on the number of income recipients would take account of these income recipients. (According to the 1920 census, 23.6 percent of the women between the ages 20 to 64 reported an occupation and the 1930 figure is 26.2.) Another factor in the increase is the changing status of women as this is reflected in the separate maintenance of property either held before marriage or inherited after marriage. Presumably, the census data would not take account of any increase in this practice. For some further discussion of the effect of the division of income between husbands and wives on the measures of income concentration see appendix note B-3 (p. 104).

#### NOTE A-3. COMPENSATION AND NUMBER OF EMPLOYEES OF STATE AND LOCAL GOVERNMENTS

Appendix table A-5 contains the estimated number of employees of State and local governments and their compensation. As indicated in chapter II, the compensation of State and local governmental employees was exempt from income taxation during the period covered by this study. Information was not available on the frequency distribution of the incomes received by this group during the years covered by this study and these income recipients were also excluded

from the data on total income and the number of income recipients. The measures, therefore, actually cover the degree of income concentration among income recipients exclusive of employees of State and local governments. On the basis of a study of the compensation of State and local government employees, considering such factors as the movement of their average incomes in relation to the minimum incomes of the highest 1 percent and the relation of this compensation to total income, it can be shown that the measures of income concentration presented in this study can be used for determining the changes in the concentration of income among all income recipients. This seems to be the case for comparisons between different years as well as for year-to-year changes. While the fact that the incomes of these employees are more stable than other incomes would tend to result in a smaller year-to-year variations in income concentration than shown in this study, the actual effect is so slight that it may be disregarded. For example, including with the income tax statistics an estimated distribution in the higher brackets of the compensation of these employees for both 1929 and 1930 (see p. 97 for source), the decline in the income share of the highest 1 percent in 1930 was 22.6 percent as compared with 23.0 percent given in table 2 of this report or 23.3 percent when the alternative method outlined below is used. In view of the fact that the compensation of these employees declined from 1929 to 1930, this comparison, which assumed no change in the distribution in the higher income brackets, exaggerates somewhat the actual difference.

The year-to-year differences in income concentration are approximately the same whether this group is included in the data on total income and on the total number of income recipients or excluded as in the statistics in chapter II. The difference between the two methods in the size of the income shares is small. If the former method is used the income share of the highest 1 percent of income recipients in 1936 is 14.04 percent as compared with 14.53 percent given in table 3, and the income share of the highest one one-hundredth of 1 percent is 1.91 percent as compared with 1.97 percent shown in table 3. It may be noted that the method used has some advantage in that it raises the minimum income level for the larger groups of income recipients and so obviates the necessity of going further down in the income scale where the income tax statistics are less reliable due to nonreporting and underreporting of incomes. This is particularly true of 1931 and 1934 in which years it is necessary to approach closely the minimum income for which it is required to file a return. In addition to nonreporting or underreporting of income for the purpose of avoiding taxation, reporting of incomes just above this minimum income is believed to be incomplete for another reason. To some extent individuals fail to file returns on nontaxable incomes above the minimum, even though returns are required by law. Various exemptions raise the size of a nontaxable income above the minimum for which a return is required. In these income ranges a difference of several hundred dollars in the minimum income of a group of income recipients may be important.

TABLE A-5.—*Compensation and number of employees of State and local governments 1918-37*<sup>1</sup>

Year	Compensation	Number of employees	Year	Compensation	Number of employees
1918.....	\$1,369,000,000	1,732,000	1928.....	\$3,388,000,000	2,339,000
1919.....	1,656,000,000	1,786,000	1929.....	3,541,000,000	2,386,000
1920.....	1,945,000,000	1,843,000	1930.....	3,641,000,000	2,482,000
1921.....	2,214,000,000	1,865,000	1931.....	3,609,000,000	2,493,000
1922.....	2,382,000,000	1,918,000	1932.....	3,540,000,000	2,471,000
1923.....	2,521,000,000	1,988,000	1933.....	3,164,000,000	2,404,000
1924.....	2,681,000,000	2,080,000	1934.....	3,132,000,000	2,427,000
1925.....	2,834,000,000	2,146,000	1935.....	3,272,000,000	2,481,000
1926.....	2,001,000,000	2,203,000	1936.....	3,471,000,000	2,574,000
1927.....	3,221,000,000	2,274,000	1937.....	3,650,000,000	2,637,000

<sup>1</sup> 1929-37 from National Income Division, Department of Commerce. The 1929 estimate was extrapolated backward until 1919 on the basis of unpublished data furnished by the National Bureau of Economic Research. The estimates for 1918 were based on data in National Income and Its Purchasing Power, by Willford I. King, (p. 361).

NOTE A-4. TABLE 10.—COMPOSITION OF TOTAL INDIVIDUAL INCOME, 1918-37

For the period 1929 through 1937 the data are based primarily upon the estimates by the Department of Commerce of income paid out.<sup>23</sup> Changes in these estimates have been made in order to secure a measure of the total of individual incomes as distinguished from the concept underlying the estimates of income paid out. These changes are noted below. For 1919 through 1928 the data are based upon estimates by Simon Kuznets in National Income and Capital Formation, 1919-35, and for 1918 upon estimates by Willford I. King in the National Income and Its Purchasing Power. Both of these volumes are publications of the National Bureau of Economic Research. In general, the estimates for the years prior to 1929 were obtained in the following fashion: First, the estimates for each type of payment were adjusted so as to conform to the income concepts of the Department of Commerce. Second, the 1929 estimates of the Department of Commerce were extrapolated on the basis of the movement of the estimates of the National Bureau of Economic Research. Third, the estimates were adjusted slightly to secure a measure of the total of individual incomes. For the most part, the extrapolation of the Department of Commerce series was done by Charles L. Merwin, Jr., of the National Income Division, Department of Commerce. It should be noted the estimates of total individual income are based on a broader statistical foundation for the more recent years than for the earlier years. The extrapolation back to 1919 is superior, for the present purpose, to that for 1918 as the estimates through 1919 are based on concepts and classifications quite similar to those of the Department of Commerce. The figures for net rents and royalties are probably subject to the largest margin of error, followed, in order, by entrepreneurial income, interest, employee compensation, and dividends.

<sup>23</sup> For a discussion of the concept of income paid out see any of the bulletins of Department of Commerce on national income. The most recent is entitled Income in the United States, 1929-37, by Robert R. Nathan. The estimates for 1929-37 of income paid out used in this study are those published in the June 1939 issue of the Survey of Current Business.

As neither the Department of Commerce nor the National Bureau of Economic Research has prepared estimates of realized capital gains and losses of individuals, it was necessary to prepare such estimates for this study. The method and limitations of the estimates of realized capital gains and losses presented in this table are described below. Following is a brief description of the adjustments of the Department of Commerce estimates of income paid out.

#### COMPENSATION OF EMPLOYEES

Veterans' pensions were added to the following income items which are included as employees' compensation in income paid out: Salaries, wages, fees, commissions, etc., in cash or in kind including work-relief wages; workmen's compensation benefits; pensions paid in private industry; employee and employer contributions under the Social Security and Railroad Retirement Acts; employee and employer contributions to Federal, State, and local government employees' retirement plans.

Thus this source is composed of all payments to employees for present and past services; and since 1934, accruals to the benefit of employees under certain pension and unemployment insurance plans.

#### ENTREPRENEURIAL NET INCOME

This source is the algebraic sum of entrepreneurial withdrawals, included in income paid out and the business savings of entrepreneurs.

#### REALIZED CAPITAL GAINS AND LOSSES

These estimates are based principally upon data on the realized capital gains and losses reported by individuals to the Bureau of Internal Revenue and published in table 7 of the annual issues of the Statistics of Income. This is practically the only direct source of information on the volume of this type of income. However, as the bulk of this type of income is received by individuals filing income-tax returns any errors in the estimated amounts received by those not filing returns are not believed to seriously affect the total estimate. Because of the probable nonreporting of some of this income to the Bureau of Internal Revenue, particularly in the lower brackets, the data underestimate the total amounts actually received. These estimates, however, are not characterized by the same degree of accuracy as those for the other sources.

The realized capital gains and losses for individuals with net incomes above \$5,000 were taken largely from table 7 of the annual issues of the Statistics of Income. The net realized capital gain or loss is the algebraic sum of the following items as classified in Statistics of Income: (a) "Profit from the sale of real estate, stocks, bonds, etc., other than taxed as capital gain from assets held more than 2 years" (table 7); (b) "capital net gain from the sale of assets held more than 2 years" (table 7). This separate classification was in use from 1922 through 1933; (c) "Net loss from the sale of real estate, stocks, bonds, etc." (table 7); (d) "loss reported for tax credit on capital net loss from sale of assets held more than 2 years" (table 2). It was necessary to multiply the data on tax credits by

8 as 12½ percent of the loss was taken as the tax credit. This separate classification was in use from 1924 through 1933.

The amounts of gains and losses received by all individuals with positive net incomes below \$5,000 were estimated by the method indicated below. Since 1927 the realized gains and losses of individuals filing returns with negative net incomes have been published in a special table in the Statistics of Income. For earlier years the amounts were estimated. In addition it was necessary to prepare an estimate of realized capital losses received by individuals with net incomes of \$5,000 and over during the years 1918 through 1925 comparable to data published for later years. A description of this estimate is presented below. For these years the losses were not tabulated separately in the Statistics of Income but were included with other deductions from total income.

The estimate of realized capital loss for 1934 comparable in definition to the estimates for 1918 through 1931 was made with the aid of an unpublished special tabulation of actual realized capital gains and losses in 1934 which was made available by the Treasury Department. This tabulation presents data on actual capital gains and losses as distinguished from the data on statutory gains and losses published in the 1934 issue of the Statistics of Income. Statutory realized capital gains and losses include varying proportions of realized capital gains and losses depending on the length of time the asset was held and the capital loss for each individual was limited to \$2,000 in excess of gains.

The definition of capital assets is slightly more inclusive beginning in 1934. Included as a capital asset before 1934 was all property not connected with the taxpayer's business or trade. In 1934 the definition was broadened to include all property held, whether or not connected with trade or business, except stock in trade, property which would be included in inventory, or property held for sale in ordinary course of business. Consequently for the years 1934 through 1937 the definition of capital asset differed from that of earlier years, in that property connected with trade or business, exclusive of stock in trade, was included within the definition. The basic data for the 1934 estimate also differ slightly from the data for previous years due to the method of classifying realized capital gains received through partnerships and fiduciaries. Prior to 1934 that portion of capital gains and losses from the sale of assets held over 2 years received through partnerships and fiduciaries and classified by individuals filing returns as "capital net gains" (1922-31) or as tax credit for loss (1924-31) was not included with partnership or fiduciary income (as was true of all other realized capital gains and losses) but with realized capital gains and losses. Beginning in 1934 all realized capital gains and losses received through partnerships and fiduciaries were classified with those sources. There is no way of determining on the basis of available information the net effect of these two factors on the comparability of the estimate of realized capital loss for 1934. To some extent these two changes offset each other.

As has been already indicated the estimates of realized capital gains and losses for the years 1934 through 1937 are not comparable to the estimates for previous years. In addition to the two differences mentioned directly above, varying proportions of realized capital gains

and losses depending on the length of time the assets were held, with a limit of \$2,000 on the size of net loss, were included in the income-tax data. Thus 100 percent of the gain or loss on assets held 1 year or less is taken into account, 80 percent on assets held 1 year but not over 2 years, 60 percent on assets held 2 years but not over 5, 40 percent on assets held 5 years but not over 10, and 30 percent on assets held over 10 years.

No attempt was made to correct the income tax data for underreporting and nonreporting of realized capital gains to the Bureau of Internal Revenue. It is generally believed that such income is subject to a considerable degree of underreporting and nonreporting and the amounts of realized capital gains are consequently understated for each year. As the chief interest of the present study lies in year-to-year movements rather than in correct absolute totals for any year, the understatement, provided it is of the same degree each year, is not a serious defect.

The estimates include the realized capital gains and losses received directly by individuals and do not include the realized capital gains and losses of those institutions designated in national-income studies as aggregates of individuals. (These include savings, building-and-loan associations, mutual savings banks, mutual insurance companies, and other associations for the collective savings and investment of funds). As the other property income received by these institutions is included in the estimates, the treatment accorded realized capital gains and losses may seem inconsistent. However, there is reason to believe that the relatively small amount of such income received by these associations is treated in a different manner than other property income. Presumably, according to conservative accounting practice, the gains would be segregated so as to offset losses of later years. Over long periods the net gain or net loss may be received by the members of these associations, but over short periods it is doubtful if the income position of the members is much affected by such gains or losses. At any rate, largely because of the type of assets held by these institutions, the amount of gains and losses realized are relatively small. This is shown by the following tabulation of realized capital gains and losses of certain of these associations taken from a detailed industrial tabulation of corporate income-tax returns similar to that published by broad industrial groups in the annual issues of the Statistics of Income. It should be noted that the years for which data are available were characterized by abnormally large realized capital gains or losses. No data are available for mutual savings banks and savings, building-and-loan associations.

[In millions of dollars]

	1929	1930	1931	1934 <sup>1</sup>	1935 <sup>1</sup>	1936 <sup>1</sup>
National and State banks.....	45	15.0	-93	-8	60	121
Life insurance companies.....	35	-14.0	-70	-	-	-
Other insurance companies.....	( <sup>2</sup> )	- .5	-2	-1	-2	9
Total.....	80	.5	-165	-9	58	130

<sup>1</sup> \$2,000 limitation on loss.

<sup>2</sup> Losses not available, gains were 0.2.

*Methods of Estimate.*

(a) *Realized capital gains and losses of individuals with net incomes under \$5,000.*—These estimates were obtained by extrapolating separately, by thousand-dollar-income classes, the amounts of gains and losses for the net-income classes below \$5,000. The algebraic sum of the estimates of realized capital gains and losses was taken as the net realized gain or loss. Data from table 7 of the annual Statistics of Income were used for the income classes above \$5,000. The extrapolation curves were drawn with the aid of a flexible rule and with the following information which was utilized in improving the accuracy of the extrapolation:

1. As the exemptions for the Wisconsin State income tax are lower than those of the Federal income tax the behavior of gains and losses in the lower-income classes was studied. The data are published in Wisconsin Individual Income: 1936 Income, volume 1.

2. The unpublished Treasury tabulation for 1934 which presented actual gains and losses by \$500 class intervals below \$5,000. This information was useful in view of the fact that the statistics by source of income are presented in the annual Statistics of Income by income classes only for net incomes above \$5,000 except for the years 1918 through 1926. These data are useful only above the exemption limit which in 1934 was \$2,500 for a married person and are limited for the classes immediately above by the nonreporting of incomes and the understatement of gains which characterize these income classes.

3. The estimates obtained by separately extrapolating the amounts of capital gains and losses were checked by extrapolating into the lower-income classes the ratios of gains and losses to net income. Estimates of the distribution of income below \$5,000 by the National Bureau of Economic Research for 1918 and by the Brookings Institution for 1929 were useful in determining the approximate distribution of incomes in the classes from zero to \$5,000. Estimates of the average income of all income recipients were used to vary the distribution from year to year. The information derived from extrapolating the ratios was especially helpful in guiding the extrapolation by amount of gain and loss in the lowest income classes.

As is readily seen the estimates for each year of realized capital gains or losses for income recipients with net incomes under \$5,000 are subject to understatement as the data used for extrapolation are understated. Since the chief interest of the present study is in year-to-year movements rather than showing correct absolute totals, the understatement, provided it is of the same degree each year, is not a serious defect.

(b) *Realized capital losses: 1918-25.*—For these years the realized capital losses of individuals filing positive net income returns were not shown separately in table 7 of the Statistics of Income but were included with "Other deductions". Hence it was necessary to prepare an estimate of these losses.

In general, the magnitude of realized capital losses is determined by the movements of prices of several classes of goods, by the prices and volume of purchases at various times in the past related to the prices and volume of sales, and by the volume of transactions by individuals. It was not found feasible to develop a function or formula which would relate these factors to the value of capital losses for this period. The reasons for the inability to do so may be briefly summarized as follows: Absence of adequate data on most of the above-mentioned factors; the gains resulting from transactions in the various classes of goods vary in relative importance from year to year; many diverse-price combinations are possible and the distribution of losses from assets sold by length of time they were held probably varies significantly during these years; the proportion of the total volume of transactions carried on by individuals filing income-tax returns as compared with corporations and individuals not reporting to the Bureau for Internal Revenue probably varies from year to year. In view of the variation of these factors influencing the volume of capital losses and the changes in the relative weights of these factors during this period it was not found satisfactory to develop a mathematical formula of estimating the losses. Instead estimates were prepared which contain arbitrary aspects and these estimates were checked by another method. It is believed that the error in the final estimates is relatively small.

Briefly, the following were the main steps taken in the preparation of the estimates:

The ratios of realized capital gains of individuals reporting gains to the losses of individuals reporting losses were calculated for the year 1926 through 1931. On the basis of the movement of these ratios in conjunction with the movement of series related to the magnitude of capital losses estimates were prepared of ratios for the earlier years. Data on the amounts of realized capital gains were taken from table 7 of the annual issues of the Statistics of Income for 1918-25. The principal series which were used in estimating the size of the ratios were the movement of comprehensive indexes of stock prices, data on the volume of stock-market transactions, available indicators of the prices of land and real estate. It was necessary to attach varying weights each year to the various indicators because of the reasons mentioned in the general discussion above.

The estimates were checked by use of the classification in table 7 of the Statistics of Income headed "General deductions" which includes realized capital losses, net business and partnership losses, interest paid, taxes paid and other deductions. Business and partnership losses were estimated by the method outlined in appendix note A-1, page 73. The remaining deduction items exclusive of capital losses are fairly stable from year to year and were estimated. Deducting these estimated items from the total of "General deductions," the residual is the amount of capital losses. The two estimates of capital losses were then compared, discrepancies were investigated and a final estimate arrived at.

As realized capital losses were not estimated by income classes but for all individuals filing income-tax returns as a group, it was not possible to obtain the amounts for those not filing returns by extrapolation as was done for the years after 1925. These realized capital losses

were estimated on the basis of the experience derived from the extrapolations of later years. Account was taken of changes in the size of minimum income for which a return was required by law.

NOTE A-5. TABLE 12—COMPOSITION OF INCOME OF THE HIGHEST 1 PERCENT OF INCOME RECIPIENTS, 1918-36

The basic data for this table were derived for the most part from table 7 of the annual issues of the Statistics of Income, which is entitled for recent years, "Individual returns, 1936, by net income classes: Sources of income and deductions and net income \* \* \*."<sup>24</sup> A number of adjustments were made in order to improve the year-to-year comparability of the individual sources of income. As some of the sources presented in the Statistics of Income are of interest only from the viewpoint of income taxation, they were combined with other sources for the present purpose. Combining various sources also makes for greater year-to-year comparability. It is believed that the data for each of the sources of income as given in table 12, except the second realized capital gain figure for 1934, and the capital gain figures for 1935 and 1936, may be compared from year to year without appreciable error. However, there are year-to-year differences of minor importance in the composition of some of the sources, particularly entrepreneurial net income and realized capital gains and losses. The definition of each source of income, the adjustments made, and the qualifications with regard to comparability are presented below.<sup>25</sup>

The Statistics of Income tables present the sources of income by 34 income classes for returns with a net income of \$5,000 and over and, with the exception of the years 1918-26, in 1 income class from zero to \$5,000. As the lowest net income included with the highest 1 percent of income recipients in 1934 was below \$5,000, estimates of the sources of income for the \$4,000 to \$5,000 class were prepared by extrapolation of ratios of each source to net income. The amount of each type of income received by the highest 1 percent of income recipients was obtained by straight-line interpolation using the minimum statutory net income levels for this income group.<sup>26</sup> The method of obtaining the minimum income levels is described in appendix note A-1. Except where specified otherwise, the comments refer to the data for the years 1918-31.

#### COMPENSATION OF EMPLOYEES

This item is taken directly from the Statistics of Income (table 7) classification "Wages and salaries." In recent years the title of the

<sup>24</sup> The statistics for 1923 were revised subsequent to the publication of the Statistics of Income for 1923. (See pp. 28-29 of the Statistics of Income for 1925.) The revised data which affected the distribution below \$15,000 were given only in terms of the number of returns and net income and no attempt was made to adjust the various income sources. The aggregate income of the highest 1 percent of income recipients is, therefore, overstated by \$61,000,000 in table 12. The percentage distribution in table 13 is not significantly affected by this revision.

<sup>25</sup> The description of the various sources of income is based for the most part on notes in the annual issues of the Statistics of Income, particularly the issue for 1936, and notes in "Income Forecasting by the Use of Statistics of Income Data," Review of Economic Statistics, vol. XII, No. 2 (May 1930) by J. F. Ebersole, S. S. Burr, and G. M. Peterson. The Statistics of Income for the earlier years do not contain much in the way of definition and explanation and the article in the Review of Economic Statistics was of assistance in this connection. Examination of the income-tax forms and income-tax regulations for each year was also helpful.

<sup>26</sup> The difference between the aggregate economic income of the highest 1 percent of income recipients obtained in this fashion and that obtained by graphical interpolation as indicated in appendix note A-1 was negligible.

classification has been changed to "Salaries, wages, commissions, fees, etc." which describes more fully the content. In general, all types of compensation from outside sources for personal services are included.

The data do not include allowable expenses paid out of the wages, salaries, etc., as these were to be deducted in advance. Wages and salaries paid by State and local governmental units are excluded as these were tax-exempt for the period under study. Also excluded for the same reason were the salaries of judges of Federal courts.

Prior to 1924 the wages and salaries of the individual, his wife, or dependent minors derived from a business conducted by the individual were partly included in this category. It seems that such income was reported under either wages and salaries or business income for this period at the choice of the income recipient. Beginning in 1924 this type of income was definitely classified under business profit. Prior to 1927 the taxpayer's "earned income" from a partnership was also included in the classification "Wages and salaries," but since that date, such income has been included with partnership income. No adjustment was made for either of these items. It is believed that the amounts of income involved are relatively small. The composition of this source was not changed for the years 1934-36.

#### ENTREPRENEURIAL NET INCOME

This source is the algebraic sum of the net profit and the net loss from unincorporated businesses and the individual's share of the net profit and net loss from partnerships, syndicates, pools, etc. The data for the most part are taken directly from the corresponding items as given in table 7.<sup>27</sup> Due to several changes in its composition, which are noted below, this source is slightly understated, relative to the other years, for the period 1922 through 1930. In 1934 and 1935 it is somewhat more inclusive than in the preceding years.

Among different individuals there is the possibility of some variation in the treatment of similar types of income. Thus, one person in the real-estate business might classify his income as business income while another might treat the same type of income under rents and royalties or as profits from dealings in property and include his business expenses in deductions from total income. While this variation in the treatment of income probably has an effect on the distribution among types of income in a given year, it seems doubtful that the year-to-year comparability of the income sources is much influenced.

Certain types of income received through partnerships are included in other sources:

(a) Profits received through partnerships from the sale of assets held more than 2 years which were classified by the individual for tax purposes as capital net gain from assets held more than 2 years were included with capital net gain and not with partnership income for the period 1922-31. The partnership loss on the same type of assets reported for tax credit was included with capital net loss for the period 1924-31. Thus, partnership income is understated or overstated during the years 1924 through 1931 depending on the relative size of such gains or losses

<sup>27</sup> Prior to 1930 business and partnership losses were not presented separately in table 7 of the Statistics of Income but were included with "all other deductions." An estimate of such losses was made for each year from 1918 through 1929. See appendix note A-1, p. 73, for the method of securing the estimates.

each year. For the years 1922 and 1923 this source is understated relative to the preceding years as this special treatment applied only to realized capital gains. As only a portion of the total profits or losses from the sale of property was classified as capital gain or loss from the sale of assets held more than 2 years, the bulk of such income has been included with partnership income.<sup>28</sup> The effect of this treatment of part of the realized capital gains and losses received through partnerships on the size of entrepreneurial net income is quite small in view of the following considerations: (1) In 1926, for example, less than 25 percent of entrepreneurial income was received through partnerships in the income brackets where gains and losses on assets held over 2 years were reported separately from other partnership income. (2) Undoubtedly only a small portion of this partnership income was accounted for by the gain or loss from the sale of assets held over 2 years. It should be indicated that for each of the years a greater proportion of the total gains or profits from the sale of property was reported as capital net gain from the sale of assets held more than 2 years than the proportion of losses reported as capital net loss from the sale of assets held more than 2 years. In 1934, 1935, and 1936 realized capital net gains and losses as defined by the effective income-tax laws were fully included with partnership income.

(b) Dividends received through partnerships on the stock of domestic corporations subject to taxation under title I of the effective revenue acts and dividends on the stock of foreign corporations deriving more than half their gross income from sources in the United States were classified under dividends for the years 1918 through 1931. (See description of dividend source.) As these constitute the bulk of dividends received, only a small amount of dividends is included with partnership income during these years. In 1934 and 1935 the treatment of dividends received through partnerships was unchanged except for the fact that all dividends received on the stock of foreign corporations were classified with partnership income. This change in classification is of relatively minor importance as dividends received annually by all individuals on the stock of foreign corporations probably amounted to from \$10,000,000 to \$15,000,000 during recent years.<sup>29</sup> In 1936 all dividends received through partnerships were included with partnership income. Primarily because of this change in classification data on entrepreneurial net income are not presented in tables 12 and 13 for 1936.

(c) Interest on tax-free covenant bonds received through partnerships was included with "other income" in 1920. (See below "Interest and miscellaneous property income.") Taxable and tax-exempt interest received through partnerships has been classified with "Interest and miscellaneous property income."

The data for the years 1918 through 1921 were adjusted as follows: For the period 1918 through 1921, income from fiduciaries and income received through personal-service corporations were classified

<sup>28</sup> See footnote 31 on p. 93 for explanation of cases where gains were classified as capital net gain from the sale of assets held over 2 years and where losses were reported for tax credit.

<sup>29</sup> This estimate was kindly furnished by Dr. Paul Dickens of the Finance Division, Department of Commerce.

with partnership income. An estimate of fiduciary income received by those with net income of \$5,000 and over for the years 1918-21 was made by applying, to the total of partnership, fiduciary, and personal-service corporation income, ratios of fiduciary income to the total of partnership and fiduciary income. These ratios were selected on the basis of an examination of the ratios for the years 1922 through 1936 in relation to the ratios of total property income to entrepreneurial net income and property income. In order to secure the amount of fiduciary income received by the highest 1 percent of income recipients it was also necessary to estimate the fiduciary income received by those in the \$5,000 to \$6,000 net-income class in 1918 and 1921 and the \$5,000 to \$6,000 and \$6,000 to \$7,000 income classes for 1919 and 1920. The estimates of partnership income and fiduciary income still include the income from personal-service corporations for the years 1918 through 1921. There is reason to believe, however, that the amount of this income is relatively small. A personal-service corporation was defined in the Revenue Acts of 1918 and 1921 (sec. 200) as "a corporation whose income is to be ascribed primarily to the activities of the principal owners or stockholders who are themselves regularly engaged in active conduct of the affairs of the corporation, and in which capital (whether invested or borrowed) is not a material income-producing factor. \* \* \*" These corporations were permitted for income-tax purposes to treat their income in the same manner as partnership income during the years 1918 through 1921. In 1918, 3,503 such corporations (all were required to file a return) reported a net income of \$50,000,000. When this amount is compared with the \$900,000,000 of net income reported by partnerships in 1918 (p. 11, 1918 Statistics of Income), it is readily seen that the overstatement of partnership income due to the inclusion of the income from personal-service corporations is slight. It should be noted that only a portion of the above amounts are included with the incomes of the highest 1 percent of income recipients as the amounts cited are taken from the informational returns which partnerships and personal-service corporations were required to file and not from the individual income-tax returns.

Whatever overstatement during the years 1918-21 in partnership income and hence in entrepreneurial net income results from the partial inclusion with partnership income of income received through personal service corporations tends to be offset by the exclusion from entrepreneurial income of wages and salaries of the individual, his wife and dependent minor derived from an unincorporated business and the "earned income" received from a partnership. As noted under the description of employee compensation the former type of income was partly included with employee compensation for the years 1918 through 1924 and the latter was also included with that source for the years through 1927. During the indicated years after 1921 the exclusion of these two types of income adds to the above-mentioned understatement of entrepreneurial income which is due to the exclusion of partnership realized capital gains reported for a tax credit.

#### REALIZED CAPITAL GAINS AND LOSSES

This item is partly estimated and partly taken directly from tables 2 and 7 of the annual issues of Statistics of Income. For the years

1926 through 1931, this source is the algebraic sum of the following items taken from the Statistics of Income: (a) "Profit from the sale of real estate, stocks, bonds, etc., other than taxed as capital gain from assets held more than 2 years" (table 7); (b) "capital net gains from the sale of assets held more than 2 years" (table 7); (c) "net loss from the sale of real estate, stocks, bonds, etc." (table 7); (d) "loss reported for tax credit on capital net loss from sale of assets held more than 2 years." (Table 2. It was necessary to multiply these data by 8 as 12½ percent of the loss was taken as tax credit.)

For the period 1918 through 1925, it was necessary to estimate the sum of items (c) and (d) as the data were not presented separately in the Statistics of Income, but were included in "other deductions." The tax-credit alternative method of reporting losses on assets held more than 2 years was initiated in 1924. The losses reported for tax credit were given for 1924 and 1925; however, in view of the small amount of losses reported by this method relative to total losses, the total loss from the sale of property was estimated as one item for these 2 years and the preceding years. The estimate of realized capital losses was prepared in a manner similar to that described in appendix note A-4 (pp. 87-9), except that it was done for incomes of \$5,000 and over rather than for all individuals filing a return. Then in order to obtain the realized capital losses for the highest 1 percent group estimates were also prepared for several of the income classes above \$5,000. Total profits from the sale of property for 1918-25 are presented in table 7 of the Statistics of Income. Prior to 1922 the "capital net gains from the sale of property held more than 2 years" were included in the Statistics of Income with "profits from the sale of property." In 1922 the alternative method of reporting such income as "capital net gain from the sale of property held more than 2 years" was introduced and beginning in that year items (a) and (b) were totaled to obtain the realized capital gain.

This source is comparable throughout the period 1918 through 1931, with the exception of the inclusion beginning in 1922 of gains treated as capital net gain from assets held more than 2 years received through partnerships and fiduciaries, and, beginning in 1924, the losses from the sale of assets held more than 2 years reported for tax credit and received through partnerships and fiduciaries.<sup>30</sup> It should be noted that not all partnership and fiduciary gains or losses on sale of assets held more than 2 years are included but only those which were so classified by the individual taxpayer. Whether taxpayers classified their gains or losses on assets held over 2 years in this manner depended on the tax rate applicable to their net income.<sup>31</sup>

In 1934, 1935, and 1936 no part of realized capital gain or loss received by partnerships or fiduciaries was included in this source. Beginning with 1934, the definition of realized capital gains and losses was changed as indicated in appendix note B-2 (pp. 101-2) with the result that the gains are overstated relative to those for the pre-

<sup>30</sup> The comparability of the realized-gain-and-loss item is also affected by the fact that beginning on November 22, 1921, losses from the sales or other dealings in property were not recognized if substantially the same property was acquired 30 days before or after the date of such sale, except for dealers in stocks or securities. Such losses are commonly referred to as "wash sales."

<sup>31</sup> If the taxpayer were liable to a lesser tax by paying a flat tax of 12½ percent of his capital net gain on assets held over 2 years, he would so classify such gains. If the taxpayer were liable to a lesser tax by deducting his capital net loss on assets held over 2 years from his other income than by taking 12½ percent of the loss as a tax credit, he was required to use the latter method, that is, the method which produced the greater tax. The capital-gain provision affected only those with net incomes approximately above \$30,000 from 1922 through 1931 and the capital-loss provision affected those with net incomes approximately above \$25,000 in 1924 and above \$30,000 from 1925 through 1931.

ceding years. The estimate of capital loss in 1934, comparable to a considerable extent to the data for the preceding years, was derived by the method described in appendix note A-1 (p. 73).

#### NET RENTS AND ROYALTIES

This source was taken directly from table 7 of the annual issues of the Statistics of Income. All rents and royalties received by individuals except as part of business, partnership, and fiduciary income are included. The rental value of owner-occupied homes is not included, as no account is taken of such imputed income under the Federal income tax law. This form of income is not, at present, included in the Department of Commerce estimates of net rents and royalties.

#### DIVIDENDS

This item is taken directly from table 7 of the annual Statistics of Income. Included for the years 1918-31 are dividends on the stock of domestic corporations subject to taxation under title I of the effective revenue laws, and the dividends received on the stock of foreign corporations deriving more than half of their gross income from sources within the United States. These dividends are included when received directly by individuals or through partnerships and fiduciaries. Excluded are dividends received on the stock of domestic corporations not subject to taxation under title I of the effective revenue acts. These corporations include building-and-loan associations; mutual savings banks; certain types of mutual insurance companies other than life; farmers' associations operated on a cooperative basis; various charitable, educational, fraternal organizations, and others. Also excluded are dividends received on the stock of foreign corporations deriving less than one-half of their gross income from sources within the United States. These excluded dividends were classified with "Other income" (see the income source entitled, "Interest and Miscellaneous Property Income"), except insofar as received through partnerships or fiduciaries in which case they were included with those income sources.

The data on dividends are comparable for the period 1918 through 1931 with two exceptions cited below. These two influences act to offset each other and the net effect on the size of the dividend source is probably slight. First, for the years 1918 through 1921, dividends received by the personal-service corporations were included with dividends received by individuals. The inclusion of these dividends is probably more than offset, because of the nature of such corporations, by the exclusion of dividends received by individuals from personal-service corporations. Therefore, the treatment accorded to personal-service corporations by the income-tax laws of these years (see statement under entrepreneurial income above) may be a factor in understating the dividends received by individuals for these years. Second, stock dividends received by individuals were included with dividends in 1918 and 1919. In 1920, the Supreme Court decided that stock dividends were to be excluded from income for income-tax purposes.<sup>32</sup> However, later decisions set forth certain principles by which some

<sup>32</sup> *Eisner v. Macomber* (252 U. S. 189).

stock dividends were included as taxable income.<sup>33</sup> It does appear that the amounts of stock dividends included as income in 1918 and 1919 were larger, relative to the amounts for later years.

In 1934 and 1935 all dividends on the stock of foreign corporations, except when received through partnership and fiduciaries, were included with "other income." As was the case for the period 1918-31, the dividend source for 1934 and 1935 excludes dividends on the stock of corporations not subject to taxation under title I of the effective revenue acts. Except for the exclusion of dividends on the stock of foreign corporations deriving more than half their gross income from sources within the United States during 1934 and 1935, the dividend source in 1934 and 1935 is comparable to the source for the preceding years. As indicated above, this change in classification of a portion of the dividends from foreign corporations is of minor importance.

In 1936 all dividends on the stock of both domestic and foreign corporations were included in the dividend source except dividends received through partnerships and fiduciaries. There is some offsetting influence involved in this change whereby the exclusion of those dividends received through partnerships and fiduciaries, formerly included in this source, is balanced to some extent by the inclusion of all dividends on the stock of foreign corporations and of dividends on the stock of domestic corporations not subject to taxation under title I of the effective revenue acts. However, as the amounts of these two sources are not known, no data on dividends are presented in tables 12 and 13 for 1936.

#### INTEREST AND MISCELLANEOUS PROPERTY INCOME

This income source is composed partly of several items taken from table 7 of the annual issues of the Statistics of Income and partly of items estimated. In addition to interest, this source includes those dividends excluded from the dividend source, except insofar as included in partnership income; fiduciary income which is largely composed of dividends not classified with dividends proper, profit or loss from the sale of property other than those classified as capital gains or loss from sale of assets held 2 or more years, rents and royalties, and interest; also included was income not classified elsewhere. It is not possible to present interest received separately, as interest was combined with "other income" for the years 1918 through 1926 under the heading of "Interest and investment income."

Included in this source are the following: (a) "Interest and investment income" for 1918-26 and the corresponding items of "Other taxable interest" and "Other income" for the period 1926-31; (b) taxable and tax-exempt interest on Government obligations. The tax-exempt interest on Government obligations was estimated for the years 1918 through 1923. A description of the method of obtaining these estimates is given in appendix note A-1 (pp. 74-5). For the years 1924-31, 1934-36, the interest on Government obligations was secured from the table in the Statistics of Income on tax-exempt obligations. (For example, table 8, pp. 85-86, in the 1927 Statistics of

<sup>33</sup> See list of decisions and interpretation of them in Regulations 101 Relating to the Income Tax Under the Revenue Act of 1938, U. S. Treasury Department, pp. 308-310.

Income.) The amounts reported are known to understate the total of this interest received by the individuals in the income groups included as the schedule from which this table is prepared is a supplementary informational schedule and frequently is not completely filled out;<sup>34</sup> (c) fiduciary income. This was taken directly from table 7 of the annual issues of the Statistics of Income. As fiduciary income was included with partnership income in the basic data for 1918 through 1921, a separate estimate of fiduciary income was made for these years. (See appendix note A-5, pp. 91-2, for the method of estimation.) The treatment of profits and losses received through fiduciaries from the sale of assets held more than 2 years and classified by the individuals as profit or loss from the sale of assets held more than 2 years were treated in the same fashion as the same type of income received through partnerships.<sup>35</sup> Therefore, fiduciary income is understated or overstated during the years 1924 through 1931 depending on the relative size of such gains and losses. For the years 1922 and 1923 this source is understated relative to the preceding years as this special treatment of gain and losses applied only to realized capital gains during these 2 years.

In 1934 and 1935, all dividends on the stock of foreign corporations, except those received through partnerships, were included in "Other income" or fiduciary income and hence in this source. For these 2 years and the period 1918-31, fiduciary income includes dividends received through fiduciaries on stock of domestic corporations not subject to taxation under title I and dividends from foreign corporations deriving less than one-half of their gross income from sources within the United States. In 1936 no dividends were included in "Other income" and fiduciary income includes all dividends received through fiduciaries in contrast to earlier years when the major portion of dividends received through fiduciaries were included with dividends. (See discussion under "Dividends.")

It is believed that this source may be compared without appreciable error for the years 1918-31, and 1934 and 1935. Due to the changes in 1936, no data are presented for that year in tables 12 and 13.

NOTE A-6. TABLE 15—COMPOSITION OF INCOMES BY INCOME CLASSES,  
1926, 1929, 1932, 1935

For sources and adjustment of data on the composition of incomes for class of \$5,000 and above see appendix note A-5. For the data on composition of incomes of all income classes see appendix note A-4. The amounts shown for the class under \$5,000 were obtained by deducting the amounts of each type of income for the \$5,000 and over class (derived chiefly from the annual Statistics of Income) from the estimated amounts of each type of income received by all income recipients.

Due largely to the imperfection, for this purpose, of the basic data, the amount shown for interest and miscellaneous income is probably overstated for the income class below \$5,000. In the estimates for the total individual income the property income, exclusive of realized capital gains and losses, includes the amounts received by individuals and aggregates of individuals. The latter term is defined to includ

<sup>34</sup> See Statistics of Income for 1936, p. 28.

<sup>35</sup> See discussion under entrepreneurial net income pp. 90-1.

insurance companies, building and loan associations, savings banks, and other organizations devoted to the collective saving and investment of individual savings. While the estimates of total interest received closely approximate the amount of such income received or accruing to individuals either singly or as an association, it is not known to what extent such receipts or accruals are unreported for a given year in the basic data for incomes over \$5,000, nor does present knowledge of the flow of income through aggregates of individuals permit one to determine to what extent the funds flowing to aggregates of individuals in a given year are actually received by or accruing to individuals in the same year. Although the relative proportion of dividends flowing through aggregates of individuals is much less than in the case of interest, these same considerations apply.

The amounts shown for the compensation of employees in the classes above \$5,000 excludes tax-exempt wages and salaries paid to employees of State and local governments and to judges of United States courts. However, the source for all income classes includes such compensation and the under \$5,000 class, being a residual item, includes all such compensation, a small portion of which belongs in the classes over \$5,000. The amounts involved are relatively small so that the effect on the percentages of the total income received as employee compensation for the various income classes is slight. Data from a special study of the Treasury Department of the compensation in 1937 of the employees of State and local governments<sup>36</sup> and data from the Federal Budget on the salaries of Federal judges show that \$118,000,000 in tax-exempt compensation was received by individuals in the wage and salary bracket above \$5,000. Using this figure for 1935 it is readily seen that the effect of the exclusion of this compensation in the income classes above \$5,000 produces only a slight distortion in the percentage composition of incomes for the various income classes. Thus the exclusion of such income from the under \$5,000 class results in absolute deduction of less than one-tenth of 1 percent in the percentage of total income received as employee compensation, the percentage being 68.6 rather than the 68.7 presented in table 15. For the \$5,000 and over class the table understates the employee-compensation percentage by less than 1 percent, the percentage being 37.9 rather than 37.0. The effect on the \$5,000 to \$10,000 income class is somewhat larger, the percentage being 53.5 as compared with 51.9 given in the table.

The source for all income classes headed "Interest and miscellaneous property income" includes the net balance of international flow of property incomes.

NOTE A-7. THIS NOTE DESCRIBES THE METHODS USED IN DERIVING THE DATA PRESENTED IN TABLES 16 AND 18

The purchasing power available to the highest 1 percent of income recipients was obtained by deducting from the economic incomes of this group, presented in table 12, the Federal income taxes paid by this group. The income taxes paid are given in table 3 of the annual issues of the Statistics of Income. With the use of the minimum-income levels of the highest 1 percent as given in table 4 (p. 26) of this

<sup>36</sup> Published in Hearings Before a Special Committee on the Taxation of Governmental Securities and Salaries, U. S. Senate, 76th Cong., 1st sess., p. 724.

study the taxes paid by this group were calculated. These taxes are presented in the appendix table A-6 below. To the total individual income, presented in appendix table A-3 (p. 76), direct relief and the veterans' adjusted-service compensation were added and the amount of Federal income taxes paid by all individuals was deducted. Data on the first two items are given in table 20 (p. 67), and on the total amount of Federal income taxes in the following table. The taxes are those paid on incomes of the given years.

The purchasing power shares available to the selected proportions of income recipients for 1926 and 1936, presented in table 18, were obtained in the same fashion. The aggregate income of these groups is presented in appendix table A-2. The Federal income taxes paid are given below.

TABLE A-6.—*Federal income taxes paid by all income recipients and by the highest 1 percent, 1918-37*

[In millions of dollars]

Year	All income recipients	Highest 1 percent of income recipients	Year	All income recipients	Highest 1 percent of income recipients
1918.....	1, 128	971	1928.....	1, 164	1, 134
1919.....	1, 270	1, 105	1929.....	1, 002	991
1920.....	1, 075	868	1930.....	477	460
1921.....	719	614	1931.....	246	237
1922.....	861	746			
1923.....	662	562	1934.....	511	481
1924.....	704	644	1935.....	657	617
1925.....	735	709	1936.....	1, 214	1, 136
1926.....	732	706	1937.....	1, 142	1, 050
1927.....	831	805			

Source: Table 3 of annual issues of Statistics of Income; 1923 data adjusted in accordance with revisions indicated on p. 29 of Statistics of Income for 1925. The taxes are those paid on incomes of given years.

TABLE A-7.—*Federal income taxes paid by selected proportions of income recipients, 1926 and 1936*

[In millions of dollars]

Year	Group of income recipients		
	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest ⅛ of 1 percent
1926.....	684	557	283
1936.....	1, 080	874	502

Source: Table 3 of Statistics of Income for the respective years. The taxes are those paid on the incomes of the given years.

## APPENDIX B

### SOME ASPECTS OF THE STATISTICS ON HIGH INCOMES

#### NOTE B-1. RELATION OF STATUTORY NET INCOME TO ECONOMIC INCOME

The purpose of this note is to examine the relation between statutory net income and economic income in order to learn to what extent the data on income concentration for the years 1918 through 1925 in terms of the statutory net income of the higher-income recipients may be taken as indicative of shifts in the concentration of economic income. Brief comparisons presented in chapter II (p. 24) indicated that the use of statutory net income results in a small increase in both the year-to-year variability of the income shares and in the differences among the various proportions of income recipients in the variability of their income shares. Before conclusions based chiefly on the experience of the years 1926 through 1937 may be safely extended to the data for the years 1918 through 1925 it will be necessary to determine more precisely the extent of the differences and the explanations for them.

Another way of expressing the fact that the statutory net income shares are more variable than the economic income shares is to state that there is a changing ratio of statutory net income to economic income. As will be shown statutory net constitutes a smaller proportion of economic income in years of low-income concentration than in years of high-income concentration. Therefore, the changes in the concentration of economic income are slightly exaggerated when statutory net income is used as a substitute for economic income. As was indicated in chapter II, the following items were added to statutory net income<sup>1</sup> to secure economic income: Interest and taxes paid, contributions, "other deductions," tax-exempt interest on governmental securities. Table B-1 contains the ratios of the statutory net income to the economic income of the highest 1 percent of income recipients for the years 1918-31 and 1934-37. The ratios generally rise in years of high-income concentration and decline in years of low-income concentration. To put it somewhat differently the deductions from economic income are a larger proportion of economic income in years of diminished incomes than in years of increased incomes.

TABLE B-1.—*Ratios of statutory net income to economic income—highest 1 percent of income recipients, 1918-37*

Year	Ratios	Year	Ratios	Year	Ratios
1918.....	.846	1925.....	.861	1931.....	.822
1919.....	.840	1926.....	.858	1934.....	.806
1920.....	.809	1927.....	.863	1934.....	.814
1921.....	.796	1928.....	.873	1935.....	.832
1922.....	.831	1929.....	.868	1936.....	.855
1923.....	.831	1930.....	.845	1937.....	.839
1924.....	.848				

Source: Calculated from data in table 12 and appendix table A-1.

<sup>1</sup> After adjustment of statutory net income for comparability by deducting for the years 1924 through 1931 capital losses on assets held over 2 years which were reported for a tax credit.

The behavior of these ratios is apparently explained by the fact that the deductions from economic income to arrive at statutory net income are more stable from year to year than economic income and hence constitute a larger proportion of economic income in years when income is reduced. There does not seem to be any evidence of a change in the relation of statutory net income to economic income over the whole period. If such a change took place, it would further limit or qualify the value of the measures of income concentration in terms of statutory net income. The variations in the ratios are apparently fully explained by the greater stability of the deductions as compared with economic income.

The difference between the variability of the income concentration measures based on statutory net income and economic income increases slightly as the proportion of income recipients becomes smaller. With the use of the relative mean deviations of the two sets of measures for the years 1926-37, shown in table B-2, the extent of the increased variability can be determined. The table shows the differences between the two sets of relative mean deviations, but as the absolute differences cannot be directly compared they are related to the averages of the two relative mean deviations. These percentages are presented in the last row of figures in table B-2. Except for the largest group of income recipients, the percentages indicate a slightly larger increase for the smaller income groups in the variability of the statutory net-income measures.

TABLE B-2.—*Relative mean deviations of the 2 measures of income concentration, 1926-37*

Income concept	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest $\frac{1}{2}$ of 1 percent	Highest $\frac{1}{10}$ of 1 percent	Highest $\frac{1}{100}$ of 1 percent
Statutory net income.....	0.116	0.148	0.175	0.243	0.345
Economic income.....	.099	.128	.150	.204	.286
Difference.....	.017	.020	.025	.039	.059
Difference as percentage of average of 2 relative mean deviations.....	15.8	14.5	15.4	17.4	18.7

Source: Calculated from data in table 2, p. 22, and table 3, p. 23.

The increased variability of the statutory net-income measures for the smaller proportions of income recipients is due to the behavior of the ratios of statutory net income to economic income. In years of reduced income, statutory net income constitutes a lesser percentage of economic income, the smaller the proportion of income recipients. On the other hand, in years of increased income, statutory net income either constitutes a larger percentage of economic income the smaller the proportion of income recipients or the decline in the percentages is less than in years of reduced income. These different relationships are clearly shown in table B-3 which presents the percentages that statutory net income constitute of economic income for the years 1926-34 and 1934-37. Thus in 1928 and 1929, both years of high income, statutory net income is a larger percentage of economic income as the proportion of income recipients becomes smaller. Except for these 2 years and 1926 and 1927 when the percentages are approximately the same for all proportions, the percentages decline

with the decrease in the size of the income group. However, the lower the income, or the lower the income concentration, the greater generally is the decline in the percentages. The fact that the percentages increase for the smaller proportions in 1928 and 1929 seems to be due to the unusually large incomes received during these years. In 1929, for example, the ratio of statutory net income to economic income fell until about the \$70,000 income level and then rose quite sharply for incomes above that amount.

TABLE B-3.—*Ratios of statutory net income to economic income—selected proportions of income recipients, 1926-37*

Year	Group of income recipients				
	Highest 2 percent	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest ⅓ of 1 percent
1926 .....	.859	.858	.858	.858	.859
1927 .....	.866	.863	.864	.861	.862
1928 .....	.874	.873	.874	.877	.886
1929 .....	.868	.868	.869	.874	.887
1930 .....	.850	.845	.841	.832	.828
1931 .....	.828	.822	.818	.796	.764
1934 .....	.817	.806	.795	.765	.746
1934 .....	.822	.814	.805	.776	.747
1935 .....	.829	.832	.823	.801	.779
1936 .....	.858	.855	.849	.828	.799
1937 .....	.847	.839	.830	.808	.774

Source: Computed from data in appendix tables A-1 and A-2, p. 78.

In view of the explanations for the differences between the behavior of two indexes of income concentration for the years 1926 through 1934, there seems to be no reason to believe that the relationship between the two indexes would not be approximately the same for the years 1918 through 1925 as for the years 1926 through 1934 when both indexes were available. We may, therefore, conclude that when economic income cannot be derived, statutory net income provides a method of approximating the changes in the concentration of economic income, if account is taken of the fact that statutory net income is somewhat more variable both from year to year and for different proportions of income recipients. The use of statutory net income is further limited, however, in view of the fact that measures of income concentration based on it will sometimes give incorrect information on the level of income concentration in 2 years. Comparison of the data in tables 1, 2, and 3 will readily confirm this.

#### NOTE B-2. EFFECT ON MEASURES OF INCOME CONCENTRATION OF INCOME CONCEPT IN USE DURING THE YEARS 1934 THROUGH 1937

The definition of income used for this period possesses certain peculiarities, arising from the treatment of realized capital gains and losses in the income tax law, which need to be taken into consideration in interpreting the measures of income concentration. When account is taken of the effects of the definition of income on the measures of income concentration, it will be possible to use these measures as indicative of shifts in income concentration, income being defined as it was for the years 1918 through 1934.

For the years 1918 through 1931 profits and losses from the sale of property were completely taken into account in one way or another. Beginning in 1934, varying proportions of such profits and losses are included as income, the proportions depending on the length of time the asset was held, and losses, as defined, were limited to \$2,000 in excess of gains.<sup>2</sup> To this concept of gains and losses we may apply the term "statutory capital gains and losses." One hundred percent of the gain or loss on assets held 1 year or less was included as income; 80 percent on assets held 1 year but not over 2 years; 60 percent on assets held 2 years, but not over 5; 40 percent on assets held 5 years but not over 10, and 30 percent on assets held over 10 years. The result of these provisions is that the importance of gains and losses derived from the sale of assets held for long periods is lessened considerably and capital losses are understated. It may be suggested that while the change in the treatment of realized capital gains and losses introduces a serious break in the continuity of the income-tax data, taking varying proportions of gains and losses in the manner provided in the law has some merit for our purposes. It seems probable that short-term gains and losses are more closely related to other types of current income in the treatment accorded them by individuals than are long-term gains and losses. Another related consideration and one that is partly responsible for this attitude is the fact that a gain realized from an asset held for a long period may be considered as having been accruing over these years and not properly included in full as income in the year in which the gain was realized. The emphasis given to short-term gains would be in line with this reasoning; however, unrealized gains currently accruing were not included as income.

In order to properly interpret the income measures based on the income concept embodying statutory net capital gains and losses, it will be necessary to examine the effect on them of the use of this concept. For the most part the provisions with regard to taking varying proportions of gains and losses will be accepted and attention will be directed to the effect of the \$2,000 limitation on the size of an individual's loss. By limiting the objective in this fashion, the number of variables to be taken into account in interpreting the final measures will be reduced to a manageable number.

In general, it seems that for the years covered the use of statutory net capital gains and losses results in a small amount of overstatement, except for the two proportions with the highest incomes, of the degree of income concentration relative to the degree of income concentration that would be shown when realized capital gains and losses are in-

<sup>2</sup> In addition to this change in the treatment of realized capital gains and losses, the definition of capital asset was made slightly more inclusive beginning in 1934. Included as a capital asset before 1934 was all property not connected with the taxpayer's business or trade. In 1934 the definition was broadened to include all property, whether or not connected with trade or business, except stock in trade, property which would be included in inventory, or property held for sale in the ordinary course of business. Consequently, for the years 1934 through 1937 the definition of capital asset was more inclusive than for earlier years in that property connected with trade or business, exclusive of stock in trade, was included within the definition.

It should also be noted that the method of classifying realized capital gains or losses received through partnerships and fiduciaries was changed somewhat in 1934. Prior to 1934 that portion of realized capital gains or losses received on the sale of assets held over 2 years and classified by individuals as "capital net gain from the sale of assets held over 2 years" or as a tax credit for "loss from sale of assets held over 2 years" were included with these sources and not with partnership and fiduciary income. Beginning in 1934 all realized capital gains and losses received through partnerships and fiduciaries were classified with those income sources. Thus the realized capital gain and loss source is less inclusive for the years 1934 through 1937 because of this change in classification. These changes in the definition and classification of realized capital gains and losses act to some extent to offset each other.

cluded completely. The overstatement arises from the relatively greater reductions in the incomes of the selected proportions of income recipients than in the incomes of all recipients when realized capital gains and losses are fully included. This can be shown for 1934 by comparing the two sets of data. And there is reason to believe that it is also true for the years 1935 through 1937. In 1934 the degree of overstatement is approximately the same for the three larger proportions, somewhat smaller for the highest one-tenth of 1 percent, and for the highest one one-hundredth of 1 percent there is actually a very slight understatement.<sup>3</sup> The decline in the degree of overstatement for the highest one-tenth of 1 percent and the actual understatement for the highest one one-hundredth of 1 percent are due to the fact that for these two groups, the necessary deductions for the full inclusion of realized capital gains and losses are less important than for the other three groups of income recipients. This is due, of course, to the fact that realized capital gains are a large source of income in these classes and that including them fully diminishes the importance of the full deduction of realized capital losses.

In addition to the bias for a given year, the degree of overstatement or understatement will vary somewhat with different years depending largely upon the magnitude of realized capital losses.<sup>4</sup> For the present purpose it is fortunate that the years 1934 through 1937 were not characterized by unusually large amounts of realized capital losses. However, as is readily evident from table B-4, the importance of realized capital losses has declined during these years and hence, excluding, for the moment, the two smaller proportions of income recipients, the degree of overstatement is larger in 1934 than in 1935 and larger in 1935 than 1936. Data for 1937 comparable to that shown for the other years in table B-4 are not yet available. On the basis of the available indicators of the importance of realized capital losses in 1937, it is certain that the overstatement for 1937 is greater than for 1935 and 1936 and perhaps less than in 1934. In terms of the various proportions of income recipients it seems likely that the reduction in the importance of realized capital losses would result in an understatement of the shares received by both the highest one-tenth of 1 percent, and the highest one one-hundredth of 1 percent of income recipients in 1935 and 1936 and probably in 1937.

<sup>3</sup> The concentration measures for 1934 with actual capital gains and losses and with statutory capital gains and losses, both taken from table 3, p. 23, are presented in the following table:

Group of income recipients	Percent of total income received	
	Income with actual realized capital gains and losses	Income with statutory capital gains and losses
Highest 2 percent.....	16.95	17.41
Highest 1 percent.....	12.66	13.03
Highest $\frac{1}{2}$ of 1 percent.....	9.57	9.86
Highest $\frac{1}{10}$ of 1 percent.....	4.94	5.03
Highest $\frac{1}{100}$ of 1 percent.....	1.76	1.75

The differences are somewhat less than indicated by the above comparison as the percentages in the first column are subject to a small amount of understatement. (See appendix note A-1, p. 73, where the adjustment of the 1934 data for full inclusion of realized gains and losses is discussed.)

<sup>4</sup> The other factor is the difference between various years, in the distribution of gains and losses by the length of time the assets sold were held.

TABLE B-4.—*Number of individuals among the various proportions of income recipients reporting a statutory capital loss of \$2,000 and over, 1934-36*

Year	Group of income recipients			
	Highest 1 percent	Highest ½ of 1 percent	Highest ¼ of 1 percent	Highest 1/100 of 1 percent
	Number			
1934.....	26,356	20,275	7,871	1,125
1935.....	18,198	13,719	5,084	751
1936.....	13,578	9,809	3,085	513
	Number as percentage of income recipients in group			
1934.....	5.35	8.23	15.98	22.84
1935.....	3.65	5.50	10.20	15.07
1936.....	2.70	3.90	6.13	10.19

Source: 1934 from unpublished data made available by the Treasury Department. The number of individuals is slightly understated as these data include only those returns filed through May 1935. The Statistics of Income for 1934 includes returns filed to Dec. 31, 1935. 1935 and 1936 from Statistics of Income for each year, text tables on pp. 20 and 21, respectively.

The total number of income recipients in each group is given in table 6, p. 27.

As regards the manner in which the year-to-year changes in the importance of realized capital losses affect the various proportions of income recipients, the changes in 1936 will be described. In this year the shares received by the smaller two proportions are understated somewhat more than in the previous year and for the three larger shares are overstated less. Of course, on the basis of the available data it is not possible to determine with certainty whether the share of the highest one-half of 1 percent in 1936 is overstated or understated. It may be that for this group, as a whole, the provisions of the law result in its share being the same as if realized capital gains and losses were fully taken into account. This was approximately true of the share received by the highest one one-hundredth of 1 percent in 1934.

The above discussion may be summarized briefly by stating that as a result of the bias in the income-tax data, the increase in income concentration from 1934 through 1936 was actually somewhat more than indicated by the data in tables 1, 3, 21, and 22. This is true for all the selected proportions of income recipients. The decline in income concentration during 1937 was also somewhat greater than shown by the data.

#### NOTE B-3. CHARACTERISTICS OF INCOME-TAX DATA AND METHOD OF MEASURING INCOME CONCENTRATION

This note is intended as a brief discussion of some of the reasons why the method of measuring income concentration used in this study, as compared with other methods, seemed well adapted to overcome certain limitations of the income-tax data. Largely due to the effects of imperfections of the data on the accuracy of the measures and to the difficulties involved in interpreting them, certain statistical indexes of income "inequality" have not been utilized. For the present study the absence of ambiguity and assumptions as to the meaning of

"inequality" were governing considerations in selecting a method of measuring income concentration.

Statistical devices such as the indexes or coefficients of Pareto and Gini and other measures of dispersion are commonly utilized to study changes in the degree of inequality in the distribution of income among the higher income recipients. These methods do not generally relate the indicated changes in the inequality in the upper ranges of the income distribution to the total income of all individuals. It is possible, for example, that a decline in the degree of income inequality among the individuals with relatively high incomes may be accompanied by no change in the proportion of the total income received by them. It seems that such a shift in income inequality occurred in 1931. (See ch. II, p. 33.) The simple method of taking proportions of total income received by fixed percentages of income recipients seems to have an advantage for the present purpose in that it relates the incomes of the higher income recipients to the total income of all individuals. However, as the data only cover the highest 2 percent of income recipients, this measure, in common with the others, is limited by the fact that changes might take place in the distribution of income among the lower income recipients without being reflected in the income concentration measures.

In view of certain characteristics of the income-tax data, the method adopted for approaching the question of income concentration surmounts in large part the obstacles arising from the manner in which individuals are classified in the income-tax statistics. Individuals were classified according to the size of their "statutory net incomes." This classification is unsatisfactory partly because of peculiarities in the definition of net income arising from the exclusion of certain deductions from net income, and the exclusion of tax-exempt interest. Of greater importance is the alternative provision in effect from 1924 through 1933 for treating losses from the sale of assets held more than 2 years as a tax credit rather than deducting the amounts from other income. This peculiar definition of net income, therefore, places many individuals in the wrong income class. This defect in the data is largely overcome in the measures of income concentration presented in this study.<sup>5</sup> Devices for measuring income inequality which depend on the distribution of the individuals by detailed income classes are, therefore, largely unsuited for these statistics.

In addition, the relationship between the net income concept of the income-tax law and the concept of economic income for which measures of income concentration are derived is such that year-to-year changes in the concentration of economic income are exaggerated somewhat when measures are based on the net income concept. Appendix note B-1 is concerned with the relation of statutory net income to economic income. While the transformation of the distribution of statutory net income to economic income is not entirely satisfactory, it is believed that the measures of the concentration of economic income presented are considerably superior to measures based on statutory net income when these are used to indicate changes in the concentration of economic income.<sup>6</sup>

<sup>5</sup> See appendix note A-1, pp. 71-3.

<sup>6</sup> For limitations of the transformation from statutory net income to economic income see appendix note A-1, pp. 75-7.

The method used also minimizes the importance of certain practices designed for tax avoidance that have arisen, particularly in the higher-income brackets, in connection with the operation of the income-tax law. These practices take the form of excessive or artificially created deductions and division of income between members of a family, especially between husband and wife. As all the deductions, except business and realized capital losses, are added to statutory net income to secure economic income, any deductions of this type are included in economic income. It should be noted that the deductions which appear on the schedule for business income are not added to statutory net income. Only those deductions appearing on the face of the income-tax return are taken into account.

With regard to division of income between members of a family for the purpose of tax avoidance, the effect of the practice is also minimized by the method adopted for measuring income concentration. Such devices are most often used in the high-income brackets where the surtaxes rise sharply. A simple example will serve to illustrate how the effect of this practice is minimized. Let it be assumed that through the division of property, two incomes of \$250,000 appear in the income-tax data instead of one \$500,000 income which appeared in the data during earlier years. The additional "income recipient" so created would probably not be reflected in the estimates of the total number of income recipients. The effect of this change is that there is included with the highest 1 percent of income recipients one less income at the lower limit of the group when the \$500,000 income is divided than when there is only one \$500,000 income. As the minimum incomes of the highest 1 percent are relatively small, varying from \$5,375 to \$10,140, it is readily appreciated that the effect of the practice on the measures of income concentration is minimized by taking proportions of total income received by fixed percentages of income recipients.<sup>7</sup> The effect of division of income between members of a family would have a more important effect on measures of income concentration which depend upon a detailed distribution of income by income classes. The measures for the highest 1 and 2 percent of income recipients are least affected by this practice as the increase in such divisions of property is believed to have taken place largely in the higher-income brackets.

To some extent the division of income within a family may take the form of the creation of trusts as well as the outright division of property. The aspect of this procedure that is of present interest is the effect of any increase in this practice, brought about by a desire to reduce taxable income, on the size of individual incomes and, hence, on the measures of income concentration. The same general considerations outlined immediately above apply to this practice. In addition, the effect on the data of any increase in the practice of creating trusts for the purpose of reducing income taxes tends to be offset by the double-counting involved when the income distributed to beneficiaries is included both in the income of the trust and in the individual

<sup>7</sup> This can be demonstrated with use of data on the number of wives filing separate returns. It may be indicated here that the percentage of incomes included in the highest 1 percent of income recipients represented by wives filing separately from husbands has varied from 3.2 percent in 1919 to 7.4 percent in 1928. The average for the years 1934 through 1936 was 5.3 percent only slightly higher than the average of 4.7 percent for the years 1918 through 1924. The increase has been somewhat larger for the smaller proportions of income recipients. Part of this small increase is due to rising proportion of income with gainful occupations. According to the 1920 census 23.6 percent of the women between the ages 20 to 64 reported an occupation and the 1930 figure is 26.2. Another factor is the changing status of women as this is reflected in the separate maintenance of property, either held before marriage or inherited after marriage.

income of the beneficiary. As noted at an earlier point (footnote 1, p. 71) the income of trusts are included in the data on individual income. This double-counting is true only of the data based on economic income as the statutory net income of trusts represents undistributed income and the amount distributed is included with "other deductions" which was added to statutory net income in order to obtain economic income. The distributed amounts are reported by the beneficiaries as individual income under the heading of fiduciary income. It is not possible to secure data on the statutory net income of trusts over a period of years or even for recent years. In 1935 the statutory net income reported in Statistics of Income by all types of trusts and estates was \$208,000,000 in 1935 and \$347,000,000 in 1936. Presumably a substantial portion of these amounts represents the incomes of estates and of trusts created for purposes other than reducing tax payments.

In connection with the division of property for the purpose of reducing taxable incomes, it should be mentioned that the gift tax in effect in 1924 and 1925 and since 1932 considerably reduces the feasibility of dividing income between members of the family. In addition, the change in the law effective in 1937 modifying the personal exemption for trusts operates in the same direction. In view of the foregoing discussion, it is not believed that the findings on income concentration presented in this report are appreciably affected by any increase in the practice of dividing incomes between members of a family.

Other devices of reducing income in order to avoid taxes apparently cannot be taken account of by any method of measuring income concentration. In a list of methods of avoiding income taxes prepared by the Treasury Department<sup>8</sup> the only method of reducing individual income for the purpose of tax avoidance not mentioned above is the personal holding company which takes various forms. This device enables the individual to accumulate income from property or personal services without having it included along with his other income in his income-tax return to the Bureau of Internal Revenue. However, legislation adopted in 1934 and amended in 1936 and in 1937, which was designed to force personal holding companies to distribute their incomes and to disallow certain deductions, appears to have accomplished its purpose. The new provisions probably result in individual incomes being larger in recent years than in earlier years when resort could be had to these practices of reducing incomes.<sup>9</sup>

<sup>8</sup> See p. 7, *Tax Evasion and Avoidance*, Hearings Before the Committee on Ways and Means, House of Representatives, 75th Cong., 1st sess. The committee report also mentions artificial deductions for losses from sales or exchanges of property resulting from transactions between several corporations under common control and incomes of nonresident aliens.

<sup>9</sup> For data on the incomes of personal holding companies see the issues of the *Statistics of Income*, pt. 2 for 1934 through 1937.



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